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REPORT OF THREE CASES OF LAMINECTOMY OCCURRING IN THE SERVICE OF PROF. C. N. ELLINWOOD, AT THE CITY AND COUNTY HOSPITAL, SAN FRANCISCO.

By Stanley Stillman, M.D.

Read before the San Francisco Medico-Chirurgical Society.

The following cases of laminectomy are reported, less to direct attention to the cases themselves, than to the procedure and the fact that extensive exposure of the spinal cord may be made, without great danger to the patient and without much subsequent deformity or weakening of the spinal column.

The procedure, for which we are indebted to Prof. Abbé, of New York, was the same in the three cases, and consisted, after thorough antiseptic preparations, in an incision 8 or 10 inches long on one side, and close to the spinous processes of the vertebræ. The incision was rapidly deepened to the posterior arches and the wound tightly packed with sterilized gauze for a few minutes, to check hemorrhage. The bases of the spinous processes were next exposed, one at a time, and the spines cut off close to the laminæ, with a sharp ¾-inch chisel, the intra and supra-spinous ligaments being undisturbed. The strong attachments between the inter-spinous ligaments and the ligamenta subflava were also severed with the chisel, after which heavy retractors were inserted and assisted by the chisel, used as a lever, and strong scissors to sever any remaining attachments, the flaps containing the spines and their connecting ligaments were forcibly pried and pulled aside till the tips of the transverse processes of the opposite side could be felt with the finger. Hemorrhage, though sharp, was not severe when partially controlled by pressure, and by the time the laminæ were sufficiently exposed it had practically ceased.

An opening into the vertebral canal was then made with a gouge through the eighth or quarter inch thickness of bone that remained where the spinous processes had been cut off, and enlarged by the rongeur forceps till the posterior surface of the dura was exposed to the desired extent. After whatever procedures that the particular case demanded, the dura, if it had been opened by accident or design, was carefully closed by fine catgut, and the operation completed by replacing the displaced flap containing the spines and ligaments and suturing it to its fellow with deep, buried sutures of catgut, the skin wound being closed without drainage and sealed with iodoform-collodion, and a plaster jacket applied.

The operation can be done quite rapidly. It exposes the cord fully posteriorly and as far laterally as the points of emergence of the spinal nerves, and is not accompanied by dangerous hemorrhage. The wound heals kindly, if kept clean, and the continuity of the supra-spinous ligament being unbroken, the resulting deformity is but slight. The severed spines reunite to their bases or to the sides of the trench that has been made by fibrous union, and apparently there is not much weakening of the column.

CASE I.—May C——, æt. 19; single; native of Denmark; occupation, domestic; admitted August 30, 1893. Twelve days previously patient fell from a window, a distance of 20 feet, striking on her right side in a pile of broken lumber and rubbish. She remained where she had fallen for over one hour, unable to move or speak, though conscious and suffering much pain. Immediately after being carried into the house she screamed and regained her power of speech—which unfortunately she has never since lost. Complete loss of motion and sensation was noted, from the level of the umbilicus down. At no time was she unconscious, though during the first week she was occasionally delirious. For the first three days after the accident she passed no urine; for the succeeding five days she was catheterized, since when she has urinated involuntarily. The bowels did not move till the eighth day, when an enema was given. The second movement was the result of an enema given the day after admission to the hospital. The enemata were repeated daily till the 7th of September, since when the bowels have moved involuntarily.

Examination revealed a fracture of the tenth dorsal vertebra, with considerable deformity and motion at the point of fracture. There was complete loss of sensation and power of motion below the level of the umbilicus. The displacement could, in a great measure, be reduced by traction and manipulation, and on the third day after admission, and the seventeenth after the accident, she was partially suspended and a plaster cast applied. Five days later the cast was removed on account of the bitter complaints of the patient, and she was placed on an inclined plane at an angle of 35°, with extension from the upper half of the body by straps of moleskin plaster. By means of sand bags the body was fairly immobilized, and extension in the dorsal decubitus reduced the deformity satisfactorily. She was kept in this position till November 10th—about two months—when she was placed in the horizontal position. During this time a decubitus occurred in the lower lumbar and sacral region, and at several places along the legs, in spite of all precautions used. The only improvement noted was that the line of anesthesia was lowered to the level of the pubes, and that no appreciable motion existed at the seat of fracture. The decubitus in the lumbar region was cicatrizing—patient's nutrition was good, and pain not a prominent feature. Defecatation and urination were still involuntary. It was decided to examine the cord at the seat of injury and to relieve whatever compression existed.

On the 17th of November, under ether, an incision was made from the spine of the fifth to that of the twelfth dorsal vertebra, and the spines of the seventh, eighth, ninth, tenth, and eleventh vertebræ cut off and the cord exposed in the manner already described. It was found that the body of the tenth vertebra had been broken, and that a large mass with a sharp edge encroached on the canal from in front for more than half its diameter. The dura was accidentally incised and immediately sutured with pure catgut. The cord itself was not examined. The adhesions between the dura and the canal walls were broken with a probe, the cord lifted as far as the spinal nerves would permit and an effort made to recover a portion of the projection on the anterior wall, but without success. The posterior wall opposite the projection was thoroughly removed, and for some distance above and below relieving all counter pressure. The wound was closed with deep and superficial sutures and sealed with iodoform collodion. The patient was placed in bed in the ventral decubitus, and rallied well from the operation.

The wound healed by first intention, and the stitches were removed on the eighth day. The prone position was maintained during this time, and at the close of it the line of the spines was almost perfect. Owing to her complaints it was then changed to the supine, as a result of which there was some lateral displacement of the lower two spines, the lower of which gave her a great deal of pain, though it did not overlie the exposed portion of the cord. Two months after the operation she menstruated for the first time since the accident, and could tell when deep pressure was made over the malleoli or tibiæ, though otherwise her condition was less changed by the procedure. For the last few months she has been gradually failing, and she will probably die before many weeks.

CASE II.—Thomas S——, æt. 34; ship carpenter; admitted November 21, 1893. Temperature, 100° F.; pulse, 80; respiration, 24. Twelve days ago he had fallen a distance of 20 feet, striking on his back. He did not lose consciousness, nor did he suffer much pain, but felt numb and was unable to rise. He was put to bed, and has since been unable to move his legs or void his urine. The bowels have moved but once, that being four days ago.

Examination revealed a fracture of the spine at the eighth or ninth dorsal vertebra, with considerable deformity and mobility. Complete paralysis of both lower limbs and anesthesia of both legs and the lower third of both thighs was present, and there was also a large decubitus over the sacrum. Patient was placed at once on an inclined plane at an angle of 15°, and 15 pounds of extension applied to the legs, without reduction of the deformity. This position was maintained for 30 days without any change in the symptoms. He complained at times of considerable pain in the right side, but otherwise made no complaint; ate and slept well, and the bed-sore improved rapidly.

It was decided to examine the seat of fracture, and on the 20th of

December an incision was made and a laminectomy done, involving the sixth to the tenth dorsal vertebra. A fracture of the ninth vertebra was found, with compression of the cord. All points of counter pressure being removed, the dura was incised. The cord was edematous, and old extravasations of blood were noted, but its continuity was not destroyed. The incision in the dura was united with fine catgut, and the wound closed as in the previous case. Nine days after the operation the stitches were removed, the wound having healed by first intention. The day after the operation the temperature was 101° F., but it fell to nearly normal the following day, remaining between 99° and 100°, till the twenty-seventh, when it rose to 102.5°, and thereafter fever was more or less severe.

Two weeks after the operation patient could tell when his toes were touched, and slight motion was noticeable when he tried to move them. Two weeks later his condition was about the same, but pain in the right side gave him considerable trouble; he was not eating so well, and sleep was more or less disturbed by a dry cough. Dulness was noted in the left apex, which rapidly spread till the whole left side was involved. Ten days later he began to expectorate a good deal, the sputum being muco-purulent and streaked with blood, but repeated examinations failed to reveal tubercle bacilli. From this time patient rapidly failed, and he died on February 16, 1894.

Post-mortem examination showed the left lung completely solidified, with small tubercles, only one very small cavity being discovered in the apex. The right lung was more or less studded with tubercle, other viscera normal. The body of the eighth vertebra had been driven into that of the ninth, crushing it and crowding the fragments forward and back till its anterior edge almost touched the body of the tenth vertebra, which with the eighth were intact. Remarkably firm fibrous union had taken place, and removal of the posterior wall of the canal had, apparently, sufficiently removed the pressure on the cord occasioned by the protrusion from the anterior wall of the crushed body of the ninth vertebra. The improvement in sensation and motion, though slight, was enough to encourage the belief that it would have continued, had not acute pneumonic phthisis supervened and carried off the patient.

CASE III.—Edward D——, æt. 26, colored, laborer; admitted January 11, 1894. Ten months ago was struck in the chest by a log, but was not prevented from working by the accident. Shortly after began to suffer sharp pain in the region of the fifth dorsal vertebra, which has been more or less constant since. About two months ago he noticed a lump appearing in this region. Had had a chancre, followed by secondary symptoms, two years ago; was treated for four months for same. About six weeks ago noticed that he was losing control of the lower limbs and that sensation in them was also impaired. The case came under the care of Dr. W. L. Adams, who put him on heavy doses of iodide of potash and a course of electricity. The symptoms rapidly increased, till he was unable to work and could scarcely walk. The case was then diagnosed as Potts' disease, and was referred to Dr. Hirschfelder, who concurred in the diagnosis of dorsal Potts' disease, with pus or a sequestrum pressing on the cord, and advised operation.

He was sent for this purpose to the City and County Hospital, where examination revealed a lesion at the fifth dorsal vertebra, the spinous process of which was very prominent, deviated to the right, and painful on percussion. There was marked anesthesia from the level of the tenth rib down, considerable atrophy and paresis of both lower limbs. Gait spastic and walking difficult; did not reel much when the eyes closed. Lungs and heart apparently normal.

On January 15th, under ether, laminectomy, involving the spines of fourth, fifth, sixth and seventh dorsal vertebræ, was performed. An abscess containing an ounce of cheesy pus was found under and around the transverse process, on the right side of the fifth vertebra. It communicated with another cavity of about equal size between the pleura and the head of the ribs, and also with the spinal canal, in which was a sequestrum ¾ in. long, ½ in. wide and ⅛ in. thick. The sequestrum was removed. The walls of the cavity were thoroughly scraped, as was the involved transverse process. No involvement of the body of the vertebra could be discovered. The dura was also scraped, as it was involved, but was not opened. Owing to the difficulty of reaching the intra-thoracic portion of the abscess through the original opening, a second incision was made four inches to the right of it, and the cavity entered, cleansed and packed with gauze. The original wound was thoroughly irrigated, and, as in the previous cases, closed without drainage and a plaster jacket applied.

January 24th the cast was taken off and the stitches removed from the primary incision, which had healed by first intention. The iodoform gauze packing was removed from the second incision, and, after filling the wound with glycerine-iodoform emulsion, it was repacked. Owing to the formation of a decubitus over the sacrum, the cast was not renewed. February 20th a rise of temperature occurred, and an accumulation of pus was found near the lower part of the open wound, which was drained. The iodoform emulsion was continued and the wound enlarged several times, as its contraction required; but a sinus still exists.

The anesthesia was somewhat lessened after the operation and the general condition much improved for a time, but pulmonary tuberculosis rapidly supervened, and the patient is gradually succumbing to it. There is a small sinus leading to the site of the intra-thoracic portion of the disease, but the discharge from it is very slight.

The original lesion in the spine seems to have been completely cured by the operation, and the rapidly increasing symptoms of pressure on the cord, which were the indications for operation, were at once arrested by it. Firm fibrous union occurred, and but slight deformity is present at the seat of operation.

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PUERPERAL MANIA.

By B. M. Gill, M.D., Dunsmuir, Cal.

Read before the California Northern District Medical Society.

Osler says: "We do not all start in life with the same amount of nerve capital. Parents who have been the subjects of nervous complaints or of mental troubles transmit to their children an organization which is defective in what, for want of a better term, we must call nerve force. Such individuals start handicapped, and furnish a considerable proportion of our neurasthenic patients. So long as they are content to transact a moderate business with their life capital, all may go well, but there is no reserve, and in the emergencies which constantly arise in the exigencies of modern life, these small capitalists go under, and come to us as bankrupts." I might add, the same law will include nearly all cases of puerperal mania.

It is the purpose of this paper to treat mostly of those cases of mania, and the conditions antecedent thereto, which occur shortly after confinement. In the hurry and bustle of active practice, many medical men do not, in the absence of skilled nurses, take time to order in detail every arrangement necessary to insure that perfect quiet and rest which is absolutely required after such an important event in the life of a young, and often very nervous, mother. It is true there are cases that possess such a strong and well-balanced nervous organization as to be perfectly free from any possible accident. It is not unlikely that family history has often much to do with the case. Heredity will frequently manifest itself in a very astonishing manner. Every practitioner of much experience can recall cases where, probably, had he not taken the case in hand in a very vigorous manner, it would have resulted in something serious in a few hours, or in a day or two, at least. In my own practice I have had but three cases that came anywhere near a full-fledged mania. I have seen several in the practice of others, notably so-called midwives, that were extremely serious.

Every practitioner can easily understand that the condition of pregnancy is not always physiological, but in many cases quite pathological. The action on the nervous system from reflex causes; the continuous suffering from disorders of digestion; imperfect action of the kidneys; loss of sleep, as well as a hundred other correctable symptoms to which the mother is subject, and which she is often told that she must bear, as they belong to her condition and cannot be helped, are some of the causes which lead up to that deplorable affection, puerperal mania.

It is no wonder that we often find women of sensitive nervous organization suffering from hypochondria and great anxiety as to the outcome of their confinement, which is no wise abated by the stories of garrulous neighbors as to what a hard time they had, as well as many others in their extensive acquaintance. How much better that the young mother should frequently see and consult with her family physician, who would encourage and advise her as to what is best, rather than listen to foolish gossip of indiscreet people.

It is well, also, that the physician should know that pregnancy influences a woman's susceptibility to some diseases and produces greater immunity from others. The great lack of uniformity of effects caused by pregnancy is no more than we might expect when we remember what a great variety of organizations we have to deal with. To recapitulate, while pregnant women are more protected from attacks of epidemic diseases, they are much more liable to nervous derangements, from the fact that the blood is more deficient in red blood corpuscles than the average in a non-pregnant woman, thus reversing the idea that pregnancy causes plethora. Yet, there are many exceptions to this rule. While chronic diseases, such as heart or lung troubles, may be held in abeyance, inflammatory diseases, as hepatitis, nephritis, enteritis, peritonitis, dysentery, etc., are among the possibilities; yet those conditions which provoke grave nervous disturbances should ever keep the careful and conscientious physician on the alert.

Many of the causes which lead up to other forms of insanity do not obtain in this form. While we may all agree that it is very possible there may be many common conditions, such as heredity, or an acquired weak nervous organization, yet puerperal mania has something peculiarly distinctive about it. The afflicted one is usually harmless. A tendency to suicide or homicide seldom exists, while great timidity and fear are nearly always present. Loss of sleep is a prime factor in causation, as I believe this ''nature's restorer'' is the all important *desideratum* to be obtained, if any favorable progress is to be made. In discussing any possible pathological changes, I can only say that poverty of blood and albuminuria are often accompanying conditions. In fact, it is the great essential in the treatment of this malady to insure sufficient good sleep. There is no insomnia that we encounter that is so obstinate, so determined, and so hard to overcome. I believe that if we could trace back every case, we should find the patient losing hours of sleep every night. I have often heard ladies say that the motion of the child was so strong as to disturb sleep, while anxiety as to the outcome, a hundred aches and pains, added to all the other causes, had led up to the same result. In plethoric persons it may be due to cerebral congestion, but in by far the greater number of cases it is caused by the exhaustion of the nerve centers, and general irritable state of the system consequent thereon. The prognosis in these cases, under proper care in private practice, is in a large per cent. favorable, and it may be said, I think, with much truth, that in the unfavorable cases heredity has a large influence.

While many rely on chloral hydrate, bromides, sulphonal, etc., my own experience leads to a preference for somnal as a drug. There is great danger of overdoing all drugs, and of establishing habits more or less hard to break up. Some years ago I had a case that seemed to baffle all remedies and methods. The patient had drifted into a condition of idiotic melancholia. One moment she would laugh, the next cry, or again sit for hours in a half stupid state. She had improved in a general way; could walk about, ride in the open air several miles without much fatigue, but the mental condition was constantly growing worse. As an experiment, I suggested to her husband that he take her to a stream a few miles distant, where the fishing was good, and spend a few weeks or more fishing, directing him to pay all attention to her, adjusting the fly or bait, taking off the fish, and have no other subject on hand from morning till night but fishing; thus diverting her mind, and getting her thoroughly tired out. The result was, in two days' time she slept well all night and after two weeks she was quite herself. Continued change of scene resulted in a permanent cure.

Some cases are much benefited by stimulants, yet the responsibility of the physician is again put to a test, knowing that he is placing a temptation before a weak person. So that in the choice of remedies for this very important symptom, the medical man must again be a man of sound judgment and discretion.

Next in order of treatment is the quantity and quality of food. In bad cases it is hard to have much food taken. You are anxious to secure an early return of the diminished or lost milk secretion. And here let me add, in parenthesis, that no more reprehensible thing can be done than to try to hurriedly dry up the milk in case of the death of the child. I have heard of the application of camphor, belladonna, and other agents to assist in diminishing the secretion, and this even while the patient is yet confined to the bed, all of which I think should not be recommended, more especially in the cases of extremely nervous persons. There are cases where there has been such a great loss of blood, and depletion, as to make it desirable to dry up the milk. In these nature, as a rule, does the work unaided. The bad cases will not eat, or drink, and before you know it you are at your wits' ends. Nourishing enemata will, as a rule, not be retained, while the end to be desired is rapidly vanishing. As a *dernier resort*, rather than further jeopardise my patient, I think I would forcibly put a liquid food into the stomach. Good milk and eggs, thoroughly incorporated; buttermilk (if the mother is not nursing); mutton soup; a generous beef tea, with some farinaceous thickening, would seem very appropriate for this method of feeding.

Hypnotic influences will undoubtedly do much good if applied intelligently. To sum up: many of the indications for treatment of the cases that cannot be aborted (and, I believe, many cases can be by prompt efforts), are to subdue all exhausting discharges, use all reasonable means to keep up the strength, and over and above all, have absolute conditions of quiet. All the natural excretory functions should be carefully watched, and, in short, every thing which the eagle eye of the ever watchful physician may detect that would in any way add to the nervous condition, even if it involves the temporary removal of the nearest relatives, if they do not exercise sufficient good sense to restrain their emotions and obey orders. The responsibility is great, and no man should court it unless he can have the best possible coöperation, and, if obtainable, trained nurses.

A CASE OF EXTENSIVE LACERATION OF THE PELVIC FLOOR OF FIFTEEN YEARS' STANDING, SEVERING THE SPHINCTER.—THREE UNSUCCESSFUL ATTEMPTS AT UNION.—ULTIMATE SUCCESS WITH RETENTIO ALVI.

By O. H. Hund, M.D., San Francisco, Cal.

Read before the San Francisco Medico-Chirurgical Society.

The patient, Mrs. C. D——, was delivered of her first child March 28, 1879. She was at that time 27 years old. It was a cross-presentation and the labor was tedious, the child dying during delivery. She made a very slow recovery, owing to extensive injury to the floor of the pelvis. She was afterward examined by a gynecologist of this city, who advised an operation; but while preparing for it she became pregnant, necessitating a postponement. Her second labor, like the first, was tedious, owing to cross-presentation, and the child died during delivery.

As soon as time would permit, an operation was performed with negative results. One year following she became pregnant. This was followed again by tedious labor, cross-presentation and death of the child during delivery. After this third labor she was operated on with the same poor results. Her general condition in the meantime was constantly getting worse; she had lost all control of the sphincter, and there was a constant muco-fecal discharge from her bowels. Nevertheless she kept on getting pregnant again and again, five times more, being eight times altogether. These five labors all had the same history—cross-presentation and tedious labor, the children dying during delivery. Fifteen months after the fifth accouchment she underwent her third operation, but it did not prove successful in uniting the tissues.

In May, 1893, one year after the last confinement, I saw her for the first time. She was then over 40 years of age, in very poor health, and suffering a great deal of pain about the region of the injury. She had no control whatever of the anal sphincter. When there was constipation she had but little trouble; but when the bowels were loose and when there was flatulency, she suffered a good deal.

On examination, I found that the laceration involved the sphincter ani muscle, and extended upward into the wall of the rectum and of the vagina, clear to the cervix. The muscles of the pelvic floor, except the transversus perinei and sphincter ani acted fairly, holding the two severed portions well up. The ruptured ends of the sphincter were drawn outward and backward by the retraction of the muscle. The cervix was badly lacerated and considerably enlarged, while there existed cystic degeneration of its mucous membrane.

She was first treated locally for about three months; then Emmet's operation was performed successfully, and at last, six weeks later, the day was set for an attempt to rectify the extensive lacerations present and to restore as nearly as possible to their normal conditions the vagina and rectum.

On July 29, 1893, with the kind assistance of Drs. R. L. Rigdon and Wm. J. Hawkins, the patient was fully anesthetized and placed in the lithotomy position. A Sims' speculum was introduced superiorly and the anterior vaginal wall elevated. The tissues on each side of the laceration were vivified well out on the vagina within an inch of the lower side of the vestibule, so as to obtain a broad surface for coaptation. Only enough of the mucous membrane of the rectum was removed to dispose of the cicatricial tissue present. Catgut sutures were now introduced from above downward, about one-twelfth of an inch apart, and tied on the rectal side. Each one was tied as soon as introduced, there being altogether thirty-six stitches through the rectum. Ten silk sutures were introduced through the vagina from the outer edge of the vivified vaginal mucous membrane, carried deep into the tissues, emerging a little within the edges of the rectal mucous membrane, and tied upon the vaginal side of the new-formed septum. The perineal stitches, six in number, were placed last. Iodoform was dusted on the wound and it was covered lightly with iodoform gauze.

The patient was then placed in bed and the thighs tied together. For thirty-six hours before the operation and during nine days following liquid food only was given. There was no pain to speak of after the operation, opiates not being required. The urine was drawn twice during the twenty-four hours for twelve days. On the third day she suffered from flatulency, which was relieved by the introduction of a catheter into the rectum. On the tenth day she began taking a powder containing two grains of calomel, five of rhubarb and ten of bicarbonate of soda every five hours until the bowels moved, which took place on the twelfth day. The stitches were removed on the fourteenth day, but she was kept in bed for another week. Every third day (after the twelfth) until the twenty-fourth her bowels were moved by a dose of castor oil.

On the twenty-fifth day she was allowed to get up, the wound having been carefully examined and union found to be perfect throughout. The function of all the muscles of the pelvic floor was restored and the patient was discharged from treatment with complete retaining power of the sphincter ani.

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INFANTILE SPINAL PARALYSIS: A STUDY OF ITS ETIOLOGY.

By Frank Fischer, M.D., San Francisco, Cal.

Read before the San Francisco Medico-Chirurgical Society.

There is little room for difference of opinion upon the pathological anatomy of infantile spinal paralysis. There are still a few authorities, who, like Vogel,[1] claim that the usually recognized pathology has not been conclusively demonstrated. But the clinical picture of the disease is quite concordant with an inflammation and a subsequent atrophy of the anterior gray horns of the spinal cord, and is equally discordant with any other supposed pathology. Hence, though the lesion had not been demonstrated in many necropsies, the inference as to its existence would be sufficiently logical to warrant its acceptance.

Although the pathology of the trouble offers little ground for contention, the etiology is still a matter of dispute. "Little is known," says Hammond,[2] "of the etiology of infantile spinal paralysis;" and he adds that in the great majority of cases that he has witnessed, no cause could reasonably be assigned. Another author[3] remarks: "We know little or nothing as to the causes which produce the disease." Such being the case, it will be worth while to investigate, upon this point, the histories of patients who have suffered from this trouble. The etiology of any disease is a branch of medical study upon which it is impossible to lay too much emphasis. Prophylaxis is the medicine of the future. Logical prophylaxis must be based upon a knowledge of the causes of disease, upon a provident anticipation of those causes, and upon appropriate precautions for averting their effects. Thus, the discovery of the true cause of a malady is half the cure. These reasons will, therefore, serve as sufficient justification for limiting the present paper to a discussion of the etiology of poliomyelitis anterior acuta.

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[1] A Practical Treatise on the Diseases of Children, p. 327.

[2] Diseases of the Nervous System, p. 327.

[3] Henry W. Berg in Reference Handbook of the Medical Sciences.

In a recent number of the *American Journal of Obstetrics*, Dr. Anna Galbraith discusses this subject of causation upon the basis of a large number of cases that had come under her observation. Having had access to the records of 36 cases[1] of this disease, I have in the following pages analyzed them upon lines similar to those pursued in the paper referred to.

The causes are divided into predisposing and exciting. In the former are included: Sex; age; season of the year; climate; race; condition of health; heredity, and tuberculosis or tubercular diathesis.

The exciting cause may be anyone of the following: The psychical; the exanthemata; acute febrile diseases; exposure to cold; over-exertion; traumatism; dentition, and infection.

Sex.—Boys are more frequently attacked than girls. Of the 36 patients with whose histories we are dealing, 20 were male and 16 female—a proportion of 5 to 4. This difference in frequency of occurrence in the sexes is not so great as has been found by some authors. Galbraith's cases give a ratio of 5 to 3. This preponderance of the male cases is probably not accidental. Although many of the more recent authors do not speak of the fact, or imply that the disease is equally frequent in both sexes, there is no author that finds a preponderance in the other direction. The ratios given range from 5 boys to 3 girls to 10 boys to 9 girls; the latter being the results derived from Sinkler's figures[2].

Age is, beyond doubt, a predisposing element of infantile paralysis. It is a disorder almost exclusively of infancy. Gowers states that three-fifths of the cases occur in the first two years of life, and four-fifths in the first three years; and these results represent about the average of those obtained by other writers on the subject.

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[1] Recorded at the Neurological Clinic of Cooper Medical College.

[2] Keating's Cyclopedia of the Diseases of Children, Vol. IV, p. 685.

The ages in our cases are as follows: At 3 months, 1; 9 months, 3; 11 months, 2; 12 months, 2; 15 months, 1; 17 months, 1; 18 months, 2; 20 months, 4; 21 months, 1; 22 months, 1; 24 months, 4; 27 months, 1; 36 months, 3; 37 months, 1; 43 months, 1; 46 months, 1; 47 months, 1; 50 months, 1; 54 months, 1.

It will thus be seen that the youngest of our cases was 3 months old, and that the eldest was aged 4½ years. Of the entire 33 cases, 8 therefore occurred in the first year, 15 in the second, 4 in third, 4 in the fourth, and 2 in the fifth. The curve of relative frequency thus attains its greatest hight in the second year, and then suddenly falls. During the first two years 22 of the 33 cases (66 per cent.) are found to have occurred; and during the first three years 26, or about 80 per cent. This agrees fairly well with Gowers' figures, and it is clearly evident that age predisposes to the disease.

Is there, then, any reason to suppose that the anterior horns of gray matter in the spinal cord are more sensitive during infancy than in adult life? This question would doubtless be answered in the negative, yet it will be readily acknowledged that the entire nervous system of the child is far more susceptible to impression than is that of the adult. Irritants or excitants, that in the latter would be insufficient to provoke a reaction, are ample in the former. It is well known that in many acute diseases where, in adult life, a chill or general malaise will usher in the attack—in infancy, violent convulsions will often constitute the initial symptoms. Convulsions in infancy may also result from a variety of comparatively trivial causes, as the presence of worms in the intestines—causes such as would be insufficient to produce so violent an effect in later life. These facts may, by analogy, lead to the inference that the restriction of anterior poliomyelitis to infancy is attributable to the greater irritability or smaller power of resistance of the nervous system at that age.

There is another theory that may account for this early occurrence. Dentition is an influence of an irritative nature, to which the child is subject and from which the adult is exempt, tending to the production of a nervous disorder. "The first dentition," says J. Lewis Smith, "commences at the age of about 6 months, and terminates at the age of 2½ years." This, then, would be another factor to explain the occurrence of the disease almost exclusively in infancy.

The season of the year has a marked influence in predisposition. Strümpell, in his "Text-book of Medicine," says that most of the cases occur in warm weather. This association is well exhibited in the cases under consideration. There were: in January, 1 case;

February, 0; March, 2; April, 2; May, 3; June, 2; July, 2; August, 6; September, 5; October, 3; November, 2, December, 1. You will notice that the curve of greatest frequency occurs during the warmest months, August and September; that there is a comparatively regular and gradual rise to that point, and a similar, even more gradual and regular, fall from that point. During the months of July, August and September, in which the maximum was attained, the number of cases (13) constituted about 45 per cent. of all the cases; while during the warmer half of the year over 72 per cent. of the cases are found. In Keating's Cyclopedia of the Diseases of Children, it is noted that 79 per cent. of cases occurred in the hot months. Gowers also states that of his cases, two-thirds were attacked between June and September.

Climate.—The difference in frequency of occurrence in various localities suggests its own explanation. Probably our cases do not exhibit this tendency so remarkably, because our climate does not represent such extremes of heat and cold. Heat acts simply as a prostrating influence, weakening the resistance of the individual. It is probably not the absolute degree of heat that determines the occurrence of the disease, so much as the greatness of the range of temperature in the given locality.

Race has no decided influence that can be clearly demonstrated. There are nervous diseases from which certain races are peculiarly exempt. Wharton Sinkler, in Keating's "Cyclopedia," speaks of the remarkable immunity of the colored race from chorea. Similarly, there are nations that are peculiarly subject to certain diseases. Thus, neurasthenia has been described as the American disease, *par excellence*. No such relationship, however, can in the present case be traced between race and exemption from, or susceptibility to, this malady. Of the 36 cases, 22 were born in California, 1 in Missouri, 2 in Nevada, 1 in Oregon, and 5 in other States. There were, also, 1 born in Australia, 1 in England, 2 in Germany, and 1 in Italy. The nationality of the parents was not recorded in the histories. Galbraith found that, while no race was exempt, those of German parentage seemed more prone to the disease than others. This, however, may have been a coincidence in that particular collection of cases.

Condition of Health.—We are prone to imagine that those in good health are least liable to most diseases.

In the present case, poor health does not appear to predispose to attack. For, as Strümpell has said, "the children are almost all perfectly healthy previously." He goes even further, and declares that the patients "come of healthy families without any neuropathic predisposition." Among our cases there were but seven whose previous health is recorded as poor. Of these, two had rachitis, in one case associated with microcephalus. Of the remaining five, two had been troubled previously with diarrhea, one with general digestive disturbances, one with anal fistula, and one with scrofula. The large majority, however, had previously enjoyed good health.

In a number of cases the attack was coincident with other troubles; in one with cough and a slightly sanguinolent diarrhea, in one with epistaxis and bronchitis, in three with vomiting, in one with simple diarrhea, and in one with bronchitis alone. In this record there is no trouble sufficiently uniformly associated to warrant the assumption of a causal relationship. Nor is there any disease or dyscrasia present in a sufficiently large percentage of the cases to justify the conclusion that poor health *per se* is a predisposing element. While this is the conclusion arrived at by most authors, Galbraith finds poor health in 44 per cent. of the cases.

Heredity.—Haycroft, in an article in the *Lancet*, on "Darwinism and Race Progress," quotes Dr. Bastian as follows: "It is now a well-established fact that persons who are endowed with a neurotic habit of body very frequently transmit a similar tendency to their children. It is not a tendency to any particular nervous disease, but a vulnerability of the nervous system as a whole which is transmitted, so that under the influence of even a comparatively slight strain, the weakness may manifest itself in one or other of several ways." The truth of these propositions in general cannot be denied. But in the case of infantile paralysis, the facts confirm the verdict of Strümpell, that "the children come of healthy families *without* any neuropathic predisposition." In our list there are but twelve in which I find the family histories recorded; but in only one of that number was there anything that could be construed as a neurotic family history. In this case the great-grandfather and the grandmother had died of cerebral apoplexy; the latter having also had an attack of chorea during childhood.

Tuberculosis.—The suggestion of this element as a possible factor in producing the disease is entirely original with Galbraith, and is based solely upon her own observations. She says: "On entering upon duty in the neurological department of the New York Orthopedic Dispensary, three years ago, with little more than a theoretical knowledge of poliomyelitis anterior, the first thing to strike my attention, contrary to all that the text-books taught, was the profound anemia of the little patients, accompanied in many cases with well-marked emaciation, a tendency to bronchitis, enlarged submaxillary and cervical glands, and the most obstinate eczema. Again, I was surprised by the frequency with which phthisis and other lung affections were noted." She found that in 18 per cent. of the cases there was a family history of pulmonary tuberculosis, while in 28 per cent. there was a history either of that or of some other form of tubercular disease. Among the patients themselves, she found some marks of scrofulosis, and in some a susceptibility to inflammation of the respiratory tract. Whether these manifestations were sufficiently frequent to establish a causal relation is open to argument. The fact that 12 out of 62 cases were subject to inflammations of the respiratory tract does not seem to indicate a very marked prevalence of tubercular trouble. However, the author's argument is not that tuberculosis in the patient himself predisposes to the disease, so much as that the inherited tubercular diathesis has a tendency in this direction. In one of our own cases the mother had died of phthisis. Of the children themselves, two exhibited enlargement of the cervical glands, and one had an anal fistula at the age of six weeks.

We now come to the exciting causes of infantile paralysis. The first, as given by Dr. Galbraith, is the *psychical*. By this is meant a severe shock to the nervous system. The implication is that the previous psychical condition has rendered the child peculiarly susceptible to attack. As an example, the author cites the case of a patient, two years of age, who was perfectly well until the 4th of July, when she was startled by the firing of a cannon in the neighborhood. She gave a sharp, piercing scream, and was nervous and feverish for the next two days. During the second day she dragged the left leg, and then followed the other characteristic symptoms. Dr. Galbraith says: "The exciting cause was evidently psychical, the shock being caused by the unexpected and tremendous noise." Among our own cases there were none that exemplify this cause, unless those in which a fall preceded the attack can be so construed. In such cases, however, it is difficult to decide how much to ascribe to the physical injury, and how much to the accompanying mental shock.

The Exanthemata.—It is a well-known fact that, after an attack of one of the exanthemata, a characteristic peripheral paralysis is not uncommon. It does not appear beyond the pale of possibility that the same product of retrograde tissue metamorphosis, or of germ life, instrumental in producing the paralysis in these cases, may also be concerned in the production of poliomyelitis. In the paralyses following diphtheria, or in those seen in influenza epidemics, the specific infectious material has, by its irritation, probably produced a peripheral neuritis. In infantile paralysis we have only to suppose that this same material has found a more central lodgment and caused a like irritation in the neighborhood of the anterior gray horns of the cord.

In our own cases there was but one instance in which the disease followed an exanthem. This was in a child of 3 years and 1 month, convalescing from an attack of measles, beginning five weeks before the commencement of the second trouble. In another child, aged 9 months, the eruption of measles appeared one week *after* the paralysis. Strümpell is skeptical of any such relationship. He says: "The paralyses arising after acute diseases like measles, scarlet fever, small-pox, etc., are perhaps partly of spinal origin, but they cannot be identified with idiopathic spinal paralysis of children." [1] Vogel, who describes the disease under the rather obsolete designation of essential paralysis, says: "In exceptional cases, essential paralysis of the lower extremities follows chorea, typhus fever, and the acute exanthemata. In these latter cases it develops most markedly during convalescence." [2]

Infantile paralysis is sometimes similarly associated with other acute febrile diseases, and in two cases I have noted that it followed or was coincident with an attack of acute bronchitis.

Exposure to cold has been enlisted as one of the exciting causes. In our histories there is no record of such association. Three of Galbraith's cases followed exposure to cold, and in one other case also there was a possibility of this having occurred. This is a very small percentage—hardly sufficient to warrant the predication of an intimate connection.

Over-exertion has been designated an exciting cause. The chief arguments in support of this view are that the age of most frequent occurrence is also that at which the children are beginning to walk, and that the lesion appears to occur much more frequently in the lumbar than in the cervical region. It is argued that the great functional activity of the lumbar ganglia, at the time when walking is begun, predisposes to an inflammation of those ganglia. In 91 per cent. of our cases the paralysis involved one or both of the lower extremities, while the upper extremities were implicated in but 40 per cent. Galbraith's figures are much more significant. In 100 per cent. a lower extremity was involved, every one of her cases having exhibited this feature, while in only 13 per cent. were the upper extremities affected. Another argument in favor of over-exertion as an exciting cause is that in several reported instances the paralysis has followed the taking of a long walk. Sinkler records one case in which the disease occurred after a continuous walk of five hours.

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[1] Text-book of Medicine, p. 629.

[2] A Practical Treatise on the Diseases of Children, p. 327.

Traumatism is the exciting cause to which three of our cases were ascribed. The first was in a child, 9 months of age, who had fallen, with her high-chair, two weeks before the discovery of the paralysis. This attack was also coincident with difficult dentition. In another case, the patient, aged 4½ years, fell from a wagon. Here the paralysis made its appearance immediately after the fall. The third case was a child of 4 years and 11 months, who had fallen down a small flight of stairs the day before the onset of the trouble. Galbraith reports 7 cases out of 64 as due to traumatism, 5 being the sequels of a fall, one following a violent fight, and the seventh occurring after the child had been thrown to the ground by a bicycle in rapid motion. If the traumatism be supposed to produce the ensuing trouble by its physical, rather than its psychical, effects, we must assume that it produces a concussion of the spinal cord.

Dentition.—All authors are unanimous in ascribing to dentition some relation to the present malady. The following facts render it more than probable that this process is an exciting cause of the disease. The ages of the patients correspond, on the average, to the period during which the eruption of the teeth occurs; the average age of most frequent occurrence of infantile paralysis is also the age at which the troubles of dentition are at their highest; the first dentition is associated with many other nervous manifestations in childhood. Another observation that serves to strengthen this conviction is that the dentition is almost invariably difficult in those cases that are attacked by poliomyelitis. There was but one case in our list in which it was positively claimed that the eruption of the teeth had been easy.

We have now reviewed all but one of the many factors that have, by various authorities, been supposed to contribute to the production of this disorder. The inference to be justly drawn from the observations recorded is, that infantile paralysis is either a disease due to a great variety of dissimilar and often apparently trivial causes, or that there is still another cause to which all cases can be ascribed, and to whose action these other factors are simply favoring circumstances.

Infection.—The entire clinical picture of the disease, as Strümpell has well pointed out, distinctly reminds the observer of the acute infectious diseases. We have here a trouble that occurs suddenly, for the most part in those previously in good health, and, as in many of the infectious diseases, there appears to be a particular time of year at which the disorder is most frequent. The attack is attended at its inception by a comparatively high fever. Finally, as in all the infectious diseases, there appears to be at first a general infection of the entire body, followed by a localized expression of that infection. Theoretically, infection would thus be an adequate explanation of the various phenomena of this disorder. There are, however, certain objections that must be satisfactorily met.

It will be asked, why, if this be a disease of infectious origin, is the lesion which it produces so strictly localized to one particular portion of the nervous system? In answer to this may be cited the somewhat analogous phenomenon that is exhibited in the peculiar selective influence possessed by certain drugs, sometimes one organ alone being affected. A still more striking analogy is the localized lesion found in certain infectious diseases. In typhoid fever, the agent of infection selects Peyers' patches and the solitary glands as the particular field of its activity. Pneumonia, which is now known to be a general infection of the system, finds a local expression in the lungs only. In diphtheria, the membranous deposit is confined to the upper respiratory and to the pharyngeal membranes, and we might multiply analogies by running through the entire gamut of recognized infectious diseases.

If infantile paralysis be an infectious disease, it is no more strange that its lesion should be confined to the anterior gray horns of the spinal cord than that there should be a similarly localized pathology in other infectious diseases. It is also probable that, just as in the infectious diseases, so here the lesion is at times not strictly confined to its usual site. The characteristic typhoid lesions occasionally appear on the tonsils and in other situations in the gastro-intestinal tract. In pneumonia the pericardium, the pleura, and the meninges of the brain may be invaded by the agent of infection, while the local manifestation in the lungs may be scarcely demonstrable. In diphtheria we may have a membranous deposit on the gastric or intestinal mucous membrane, on that of the genito-urinary tract, and even on abrasions of the skin. In infantile paralysis, it is therefore possible that there is not always an exclusive inflammation of the anterior gray horns of the cord.

At a recent meeting of the Vienna Medical Club [1] Dr. Redlich reported the results of an examination of the spinal cord in a 5-months old child that had died from acute anterior poliomyelitis. The lesion was not confined to the cord, but there were also observed small areas of inflammation in the medulla and in the cerebrum. "The phrenic nerve also showed spots of softening. The pathological changes would therefore point to an infectious process as causative of the disease; as a result of such an infection," says the writer, "the lesion may be in several locations, even involving the nerves, producing a multiple neuritis, a condition sometimes found associated with anterior poliomyelitis." The first objection, then, to the theory of infection would seem to have no force.

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[1] Medical Record, March 17, 1894.

A second objection that demands consideration is: If poliomyelitis is an infectious disease, why do we not occasionally hear of epidemics of the trouble? This may be met by the supposition that the agent of infection is not easily communicable; that it needs a peculiar soil for successful implantation, and that one of the most important of the favoring factors is the age of the child. This last fact would account for the escape of other children in the same family when one is attacked by the disease. When, however, there are twins in the family, this argument would not hold; and it is a fact that several cases have been reported where twins have had the disease at the same time. Occasionally we read such a statement, as the following, from the *Medical Record* of December 2, 1893: "Boston physicians find that acute poliomyelitis (infantile paralysis) was unusually prevalent during the past summer and fall." What explanation is so probable as that the disease is infectious in its origin?

At least one well-defined epidemic of the disease has been recorded. This occurred during the months of June and July, 1885, but was first reported by Cordier in the *Lyon Médical*, in 1888. There are some authorities that are inclined to view this epidemic with scepticism, and to doubt the correctness of the diagnosis. I have not had access to the original paper; but, from the perusal of several abstracts of it, there can be no doubt as to the identity of the disease, as far as the clinical picture is concerned. Cordier states that he saw 13 cases of atrophic infantile paralysis in a district containing less than 1,500 inhabitants. The patients varied in age from 10 to 30 months, and were, almost all, previously in good health. The attack in each case began with fever without other premonitory symptoms. This was followed in time by paralysis in one or more of the extremities, and subsequently by atrophy of the limbs affected. It only remained to show its contagious character to demonstrate that it was due to infection. In proof of this, Cordier states that one child was attacked 36 hours after a visit to another already affected by the disease. In another instance, two children, a boy and his sister, were exposed, and the first symptoms of the disease made their appearance eight or ten hours later.

It may be argued that in the Cordier epidemic, and in that of Boston, the weather may have been remarkably propitious to the occurrence of the disease. Granting that such were the fact, there is no legitimate reason why the unusual frequency should, in the one case, have been observed only in Boston, and in the other only in the locality mentioned by Cordier.

In view of the evidence offerred, it is probable that infantile paralysis is of infectious origin. Decisive proof of this theory can be found only in the microörganism that produces the infection. Perhaps enough has been presented to compel a partial acquiescence in this conclusion. At least, instead of rejecting the theory, we are justified, while awaiting further evidence, in according it the Scotch verdict of "not proven."

906 Market street.

HOSPITAL REPORTS.

SAN FRANCISCO RECEIVING HOSPITAL.

UNDER THE CARE OF GEO. B. SOMERS, M.D.

Death from Impaction of the Large Bowel with Undigested Wheat.

On September 4, 1894, J. M. R—— was brought to the San Francisco Receiving Hospital, suffering from intense abdominal pain. He gave no history of his trouble except that he had been constipated for several days past. Sedatives were administered to relieve pain, hot applications made to abdomen, large enemata of soap and water given, and finally saline cathartics. The enema passed without result. In about eight hours after entrance, a profuse watery diarrhea began. Nothing curious was noted in the first passages, but a few hours later the steward reported that he had found a few grains of whole wheat and corn in the stools. From this time on the patient showed symptoms of collapse, and died 24 hours after admission. The Coroner was requested to have a *post-mortem* examination made, and through the kindness of Dr. Emerson, the Coroner's physician, the following points were noted: The patient was apparently about 45 years old, well nourished, and about 5 feet 8 inches in hight. Nothing of importance was discovered in any of the internal organs except in the abdominal cavity. Considerable peritoneal fluid, of a dark, brownish color, was noted. The colon, from cecum to sigmoid flexure, showed a gradually increasing congestion. About the sigmoid and rectum there were many fresh adhesions. On opening the colon, large masses of whole wheat were found within. In the sigmoid and rectum the wheat, mixed with fecal matter, was packed so firmly as to overdistend the bowel and lodge there. Collected and weighed, it amounted to about one and one-half pounds. No perforation of the bowel was noted. The teeth were in bad condition, and not capable of grinding. The patient, before death, did not give the slightest clue as to the cause of his trouble.

DEPARTMENTS.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By WALLACE A. BRIGGS, M.D., Sacramento, Cal., and

HENRY GIBBONS, JR., M.D., Professor of Obstetrics and Diseases of Women, Cooper Medical College, San Francisco, Cal.

Non-operative Treatment of Fibroid Tumors.—DR. LUTAUD recommends the following remedies as efficacious in arresting the development of fibroid tumors and reducing the volume of the uterus. It is not always possible to operate at once upon these tumors, and in some cases it is not advisable to operate at all. Hydrastin is useful in hemorrhage and in the hypertrophied condition of the uterine tissues, which nearly always accompanies fibroids. He administers hydrastin, hypodermically, according to the following formula:

Hydrochlorate of hydrastin	cg. 50
Distilled water	gm. 10

Given daily by means of a Pravaz syringe. When subcutaneous injections are not well borne, we may use the tincture of hydrastis canadensis:

Tincture of hydrastis canadensis	gm. 4
Tincture of opium	gm. 30
Distilled water	gm. 150

Dose, one tablespoonful three times a day. Ergotin may also be given hypodermically:

Aqueous extract of ergot.	
Glycerin	āā gm. 2
Distilled water	gm. 10

Add a few drops of Van Swieten's liquid if the solution is to be kept a long time. Administer by a Pravaz syringe every two days. Whenever cardiac complications exist with great vascular distension, digitalis and iodide of potash should be associated with ergotin:

Syrup of digitalis	gm. 60
Iodide of potash	gm. 10
Syrup of orange peel	gm. 120
Ergotin	gm. 2

One tablespoonful morning and evening. Rye ergot may be administered internally if the patient prefers:

Pulverized rye ergot	gm. 5
Sulphuric acid	gm. 1
Distilled water	gm. 250

Boil, and evaporate to 100 grammes. Add—

Alcohol	gm. 10
Syrup of cinnamon	gm. 30

One tablespoonful every hour. Constipation nearly always accompanies large uterine fibroids. Pain and flatulence are frequent symptoms, due to inflammatory adhesions and false membranes. It is important to watch carefully the patient's diet, and to avoid dilatation of the stomach and intestines. Opiates are sometimes indicated, and sometimes laxatives. Tablets of magnesia and salol often relieve constipation, dilatation of the stomach and intestinal infection:

Calcined magnesia	gm. 15
Salol	cg. 0.50

In 15 tablets, one before each meal. In vomiting, or obstruction of the biliary passages, calomel is the preferable remedy, combined with opium for the purpose of preventing colic:

Calomel	gm.	1
Tincture of opium	cg.	0.5

Ten pills. One every morning and evening. Salt baths are nearly always beneficial in fibroid tumors, and patients are rendered more comfortable by wearing a fitted bandage made of light elastic material.—*Journal de Médicine de Paris*, July 29, 1894.

Treatment of Dysmenorrhea of the Cervix.—Women who have borne children are especially liable to dysmenorrhea caused by stricture of the cervical canal in the vicinity of the internal orifice. They generally suffer from cardialgia and cephalalgia of reflex origin, and during menstruation from severe pains resembling those of labor. Questioning will usually elicit an account of previous attacks of endometritis caused by labor, abortion, or some morbid condition. Examination with a sound reveals a stricture on a level with, or immediately in front of, the internal orifice; the passage of the sound through the stricture causes severe pain. In 5 cases of this form of dysmenorrhea, DR. NOLL used applications of chloride of zinc, 50 per cent. of tincture of iodine and of perchloride of iron, with dilatation of the cervix with Hegar's sound No. 10, without attaining any permanent result. He then decided to perform the operation advised by Feilsch for internal stricture. After disinfection of the parts, he dilated the stricture with Hegar's bougie No. 9; and then, with a small bistoury, made radiating incisions in the contracted part, sponged it with sterilized gauze, and applied a Paquelin cautery, corresponding in size to the dilator No. 9. The dilated part of the canal was then tamponed with iodoform gauze, which was pushed into the uterine cavity. The patient should keep her bed for six days. This treatment effected an immediate and a permanent cure in every one of the five cases.—*Centralblatt f. Gynäkologie*, No. 231, 1894.

Dangers of Curettage.—During a recent discussion of this subject in the Obstetrical and Gynecological Society of Berlin, six cases were reported which show how dangerous this operation may be in certain conditions of the uterus. The principal danger is that of perforation; but it is not equally great in all cases. In metritis the uterine tissues are resistant, and afford a solid floor upon which the curette may be carefully moved backward and forward with slight risk of perforation. The uterus is in a very different condition after abortion or labor. The tissues are profoundly modified, and the thickness of the walls greatly diminished. The dimensions of the cavity are irregular, and there is danger, even with the greatest precautions, of penetrating the peritoneal cavity. The cases reported by the German surgeons were principally of this kind, and in several of them the wound was so large that a loop of the intestines entered the cavity of the uterus. These cases are instructive, as they show that this operation should not be undertaken lightly, even by skilful men. They demonstrate what we have long known, and what cannot be too often repeated, that the uterus in involution is ruptured with the greatest facility; but these accidents should not deter us from performing curettage, when it is necessary to prevent infection from retained placental debris.—*Union Médicale*, June 19, 1894.

Hydrastinin in Uterine Hemorrhage.—DR. KALLMORGEN, of the Woman's Polyclinic in Berlin, has just published a report of 86 cases of uterine hemorrhage of diverse origin, treated with hydrastinin. This report affords much needed information in regard to the *permanent* effects of this remedy. Dr. Kallmorgen administered hydrastinin in pills made according to the following formula:

Hydrastinin ....gm. 1.
Make into 30 pills.

These pills were generally borne well, though in a few cases they excited slight gastric irritation, and in others painful uterine contraction. Their hemostatic action varied according to the cause of hemorrhage. In 5 cases of hemorrhage due to retro-uterine hematocele, the flow was almost immediately arrested. In 25 cases of functional menorrhagia, the amount and duration of hemorrhage were reduced to normal conditions, and the dysmenorrhea, which complicated many of these cases, was partially or entirely relieved. Hydrastinin should be administered in functional menorrhagia a day or two before menstruation appears, and while it continues. Begin with two pills a day, and increase the number to three. Hydrastinin relieved 15 out of 18 cases of hemorrhage following abortion, and 3 out of 4 cases due to lesions of the annexes. Its effects were much less favorable in hemorrhage produced by chronic endometritis, as it positively benefited only 55 per cent. of these cases. In beginning abortion, it was successful in 37 per cent., and in uterine fibroids its hemostatic action was apparent in only 25 per cent. of the cases treated. In hemorrhage caused by cancer of the uterus, hydrastinin produced no effect whatever.—*Journal de Médicine de Paris*, July 15, 1894.

Treatment of Ovarian Cysts by Injections of Salts of Lithium, Ammonium, Lead, etc.—Dr. G. M. da Silva Jones, of Lisbon, has used injections of salts of lithium, etc., in certain kinds of ovarian cysts since 1883, and he publishes the following conclusions: (1) Although ovariotomy is the treatment *par excellence* of ovarian cysts, there is a class of cases in which it cannot be performed, and these cases afford an opportunity for treatment by injections. (2) Unlike the old methods, this treatment, founded upon new physical principles, seeks to avoid vascularization and inflammation of the walls of the sac. (3) Membranes penetrated by a solution of nitrate of lead, and probably by all salt solutions of low molecular weight, are more quickly permeated by other salt solutions than they were before. (4) Solutions of salts of low molecular weight generally permeate membranes more quickly than others, and chloride of lithium surpasses all others in this respect, though it may itself be surpassed by fluoride of lithium. (5) The solution of chloride of ammonium, which penetrates membranes almost as quickly as the solution of salts of lithium, possesses besides, in nearly as great a degree as that of nitrate of lead, the property of rendering membranes more permeable to the passage of other solutions, and perhaps fluoride of ammonium will prove to possess this double property in a higher degree than sal ammoniac itself. (6) These properties of the different salts may be applied in the treatment of ovarian cysts, to modify the condition of their walls, or their contents, or both. (7) In this method of treatment, injections should be made by displacement, and the choice of salts should depend, as much as possible, upon indications furnished by a careful study of liquid taken from the tumor before injections, and by attentive consideration of the patient's condition. (8) If chloride of ammonium, or a chloride possessing similar properties, be not used by itself, the two salts employed should be administered at different times, and experience alone can determine the proper interval between injections, or whether it is not better to inject the

two solutions at the same time. (9) Whatever the plan of treatment pursued according to this method, and whatever its immediate effect, it should be pursued until cure is attained, or accident occasions temporary or definitive interruption.—*Gazette de Gynècologie*, June 1, 1894.

SURGERY.

By T. W. HUNTINGTON, B.A., M.D., Surgeon Southern Pacific Company's Hospital Sacramento, Cal., and

G. F. SHIELS, M.D., C.M., F.R.C.S.E., Surgeon Post-Graduate Department University of California, San Francisco.

Incision for Appendicitis.—McBURNEY (*Exchange*) describes a new method of operating in certain cases of appendicitis which promises a more perfect result, as regards the strength of the abdominal wall, than is usually observed. The incision in the skin is an oblique one, crossing a line drawn from the anterior iliac spine to the umbilicus nearly at a right angle, about 1 inch from the iliac spine, and is so situated that its upper third lies above that line. The section of the external oblique muscle and aponeurosis should correspond, great care being taken to separate these tissues in the same line, not cutting any fibers across. The edges of the wound in the external oblique are strongly pulled apart with retractors, displaying a considerable expanse of the internal oblique muscle, the fibers of which cross somewhat obliquely. These fibers and those of the transversalis muscle can then be separated with a blunt instrument in a line parallel to their course. The edges of this deeper wound are next separated with blunt retractors, thus exposing well the transversalis fascia, which is then divided in the same line. Last of all the section of the peritoneum is made. Two sets of retractors must be used, one holding open the superficial wound from side to side, the other separating the edges of the deeper wound from above downward. The muscular and tendinous fibers being separated and not divided, muscular action will rather approximate than draw apart the edges of the wound. There is scarcely any hemorrhage, except during incision of the skin. The transversalis fascia can easily be completely sutured, and there is but little pain after the operation. The operation takes more time than the usual one, and more assistance is necessary. It does not appear to be suitable for cases accompanied by suppuration about the appendix, nor in non-suppurative cases which require a large intra-abdominal dissection during operation. The author has performed this operation on four patients in the intervals between attacks of recurrent appendicitis.—*British Medical Journal*, August 11, 1894.

Persistent Edema and Elephantiasis following Extirpation of Lymphatic Glands.—RIEDEL (*Arch f. klin. Chirugie*) mentions how rarely cases have been published in which persistent edema or elephantiasis has been noticed after extirpation of lymphatic glands. These results of the operation, he thinks, are not really very rare, for he has himself observed them in three cases. The first was that of a boy, aged 12, where edema of the whole arm and hand was the result apparently of removal of lymphatic glands from the axilla three years previously. The second patient was a strong-looking man, aged 30. Some years previously he had contracted a soft chancre, and suppuration about the left inguinal glands followed. Since then the glands had always remained tender, and became swollen after much walking or after any excoriation of the glans penis; suppuration in both groins followed on one such occasion, and the sinus openings refused to heal. Riedel excised the inguinal glands, and found them studded with minute abcesses about the size of millet seeds. After the operation the wounds healed well by granulation, but, when seen about two years later, the patient was found to have some degree of elephantiasis of the skin of both thighs and the lower part of the trunk; he had also enlargement of the glands in the right axilla. The third patient was a strong-looking man, aged 30. A soft chancre, acquired three-quarters of a year previously, had given rise to suppuration in the left groin, and the sinuses would not heal. Riedel excised the left inguinal glands, and about half a year later an elephantiasis of the skin of the thigh developed itself. In both the second and the third cases the development of the elephantiasis was associated with repeated erysipelas-like attacks. Riedel declares himself uncertain about the advisability of complete extirpation of the inguinal glands in similar cases. *British Medical Journal*, August 4, 1894.

Curettage of the Rectum for Cancer.—At a recent meeting of the Académie de Médecine, Paris, M. QUÉNU presented a patient who suffered from cancer of the rectum for the last 5 years. When the man was seen for the first time, no operation was possible, and he was obliged to create an artificial anus. But this operation was insufficient, as the patient continued to lose a good lot of blood and to become rapidly cachectic from auto-infection. Thinking that curettage applied to advanced cancer of the uterus might be suitable to this case, M. Quénu performed this palliative operation with very good result. The hemorrhage ceased, as well as the auto-infection resulting from the cancerous mass. The patient gained 6 pounds in a month, all fetid odor had disappeared, and the rectum recovered its permeability. The speaker ended by saying that this operation might be more frequently practised to the great benefit of the patient.—*Medical Press and Circular*, August 1, 1894.

Resection of the Thoracic Wall for Dangerous Pulmonary Hemorrhage. ISRAEL reports the following case: The patient, æt. 39, had hereditary tendency to tuberculosis. In 1874 he had right-sided pleurisy, which in 1883 led to resection of the ribs, but without any particular result. In the autumn of the same year the speaker resected three ribs, but the suppuration still continued, and to this was frequently added hemoptysis. Under the influence of treatment by baths the suppuration diminished, but the tendency to hemorrhage still continued. On January 15th the patient presented himself with profuse hemorrhage which had continued uninterruptedly for 5 days. He was exceedingly pale, the right side of the thorax scarcely moved at all. Bright blood streamed out of the defect in the thoracic wall the size of a 5-shilling piece. The whole pleural cavity was filled with blood clot. By the aid of a laryngoscopic mirror and the electric light, after clearing out the cavity, the spot from which the blood continuously poured could be distinguished. It was in the upper part of the pleural cavity. Iodoform tamponade was first performed, but without any result. Hemoptysis immediately took place. As the patient's strength was diminishing in a threatening manner and hemoptysis with bacilli also came on, the speaker determined to seek out the bleeding spot. The operation was performed January 23d. From the fistulous opening an incision was made through all the soft parts 20 cm. directly upward; he then resected the ribs from the 2d to the 6th, 8 cm. each, slit the thickened pleura, resected it, and now had the upper part of the pleural cavity completely open. It was then seen that the blood streamed from the upper part where the costal pleura passed into that of the lung. Along with the blood bubbles of air burst through, showing that the parenchyma of the lung was also opened. The whole pulmonary pleura was converted into granulation tissue with shallow tuberculous ulcers. The speaker then pressed a pledget of sterilized Penghawar-Jambi enveloped in gauze for several minutes on the bleeding spot, and after cessation of the hemorrhage filled the whole remaining cavity with iodoform gauze. By this means, not only the direct hemorrhage, but the hemoptysis, were definitely arrested—a proof that both arose from the same ulceration. The gauze was removed on the fourth day. The pleura was then treated by painting with tincture of iodine and calomel, powdering later with arg. nit. and iodoform-ether spray. Under this treatment the cavity cleansed and contracted, and the greater part became covered with epidermis, which had pushed in from the margin of the skin. The man had gained 30 pounds in weight. The operation was not only useful in saving life at the time, but it made the diseased pleura accessible to successful local treatment.—*Medical Press and Circular*, August 1, 1894.

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By WM. ELLERY BRIGGS, M.D., Sacramento, Cal.

Intra-Laryngeal Therapeutics.—DR. GORDON SHARP says that intra-laryngeal injections were at first made with a view of applying antiseptics directly to the lungs, of killing the bacillus, or of alleviating the troublesome cough. A communication from Prof. Grainger Stewart shows the value of this plan of treatment in bronchiectasis, and the author believes that this is the disease which is likely to be most influenced by intra-tracheal treatment. By applying creasote, guaiacol or other antiseptics directly to the interior of the trachea, whence it is certain to trickle down into the bronchial tubes, one may be able to prevent, to a great extent, the formation of putrefactive bodies and mild attacks of septicemia. The most probable cause of bronchiectasis is an atrophy of the walls of the bronchial tubes. The resulting dilatation goes on increasing unless checked, and nothing so much tends to aggravate the condition as the filling up of the cavities and decomposition of the contents, with the production of foul gases. If the secretion can be lessened, and the cavities kept comparatively sweet, the tissues are given a chance of regaining a certain amount of tone, while at the same time those septicemic attacks are prevented; the comfort of the patient is also increased by diminishing the disagreeable odor and by relieving the irritating cough so frequent in bronchiectasis. Drugs injected into the trachea, while exerting a local action in the lung and bronchial tubes, find their way into the circulation. In a case in which a solution of menthol and guaiacol in olive oil was so administered, the menthol was detected in the urine two hours later. One can hardly hope to obtain brilliant results by intralaryngeal method in cases of phthisis. Antiseptics so used have little effect upon the course of the disease in general; but for the alleviation of the cough a 10-per-cent. solution of menthol in olive oil, or in one of the pure preparations of higher paraffines, is often of great service. The application of injections intralaryngeally at first appears to be difficult, but it is really a very simple one. The patient sits facing a good light, and is told to pull the tongue well forward, and to take a few deep breaths. The doctor stands or sits a little to his right, from directly in front of the patient. The syringe is filled and the point passed over the tongue in a slanting direction and not directly over the center. Thus the tip of the epiglottis, which is so sensitive, is avoided. The fluid is slowly forced, drop by drop, into the larynx. One should catch the glottis just as the patient has taken an inspiration. This gives sufficient time to inject a fluid drachm before the patient is obliged to breathe again. This may be repeated several times at a sitting, in case it is deemed necessary. Some of the paraffin preparations are generally preferable to other oils, as they do not become rancid. The drugs usually employed are of an antiseptic nature, such as creasote, guaiacol (2 per cent.), menthol and thymol (5-10 per cent.), salol (5 per cent.), salicylic acid (2 per cent.), carbolic acid (1 per cent.). A good solution consists of guaiacol (2 per cent.), menthol (10 per cent.), and olive oil (88 per cent.). One fluid drachm of this solution may be injected into the trachea in cases of fetid bronchitis, bronchiectasis, or pulmonary phthisis. Other drugs may be used, provided they are conveyed in a non-irritating fluid and are of such a nature as not likely to cause local injury.—*Lancet.*

New Experiment on Keratoplasty and Measures Against Prolapse of Iris in Simple Extraction.—At the International Medical Congress, DR. VAN MILLINGEN reported his experience in attempting to restore vision in cases of extensive leucoma, especially in cases of totally adherent leucoma with degeneration of the lens. In such cases the author trephines the leucoma as far as the vitreous, removes the calcified lens, and applies Sulzer's contact glass. In one case the vision remained good for a year and a half, in another for 3 months. In a third case panophthalmitis set in 5 months after the operation. After simple cataract extraction, Dr. Van Millingen applies very thin contact glasses to prevent prolapse of the iris. An assortment of them must be on hand and adapted to the eye, under cocain, before the operation. It is applied immediately after the operation. The air bubbles are driven out with a 4-per-cent. boric acid solution. The eye is washed with the same solution at each dressing. The glass is left in place until the fourth day. In fifteen cases the author had perfect success, with a most speedy and equal wound healing. The frequency and degree of post-operative astigmatism are lowered by this method.

Archives of Ophthalmology, July, 1894.

DERMATOLOGY, SYPHILIS AND VENEREAL DISEASES.

By G. L. SIMMONS, JR., M.D., Sacramento, Cal.

Erysipelas and Gonorrhea.—DR. ALEXANDER SCHMIDT reports (*Centralblatt f. Gynäkologie*) an interesting case of gonorrhea, in which a superadded attack of erysipelas apparently displaced or cured the patient of the former trouble. The patient, a girl of 3 years, came under his care for the treatment of gonorrhea of the vulva. On the third day there appeared on the left thigh and gluteal region a typical erysipelatous patch that was separated by about two fingers' breadth from the vulva. Immediately the temperature rose, and the purulent secretion decreased. The erysipelas spread over the lower extremities, and passed away after a week. The inflammatory condition of the vulva and urethra passed away the second day after its appearance, and did not return.

International Medical Magazine, June, 1894.

Treatment of Cystitis by Sublimate Injections.—COLIN reports 34 cases so treated, the results of which are: 12 cases recovered, 9 very much benefited; 9 improved, and 4 remained uninfluenced. It is important to remember that the first injections sometimes give great pain. Every second day is often enough in the commencement; later, the injections may be given daily, increasing from weaker to stronger solutions. Corrosive sublimate solution (1:500) is the strongest used, and can be borne only by bladders affected with cystitis. The amount usually injected is from 5 to 10 grammes in the bladder, and from 10 to 15 drops in the posterior urethra and neck of the bladder.—*Centralblatt f. Chirurgie.*

Massage of the Seminal Vesicles.—Fifteen cases of chronic urethral discharge dependent on the retention of the seminal fluid in the vesicles are reported as cured by DR. EUGENE FULLER'S massage treatment or stripping of the seminal vesicles (*Journal of Cutaneous and Genito-Urinary Diseases*). This method is to insert the greased forefinger into the rectum and stroke the seminal vesicles. This stripping process forces out the retained semen. Repeating the treatment once a week he claims to accomplish very happy results in relieving the chronic urethral discharges dependent on vesiculitis.

Syphilis and Tabes in Japan.—M. GRIM states that tabes is very rare in Japan, while syphilis is quite frequent. This is owing to the sensibility of the nervous system of the Japs. He concludes that syphilitic infection will not explain the frequency and development of locomotor ataxia as much as authorities have alleged.—*Journal de Médicine de Paris*, July 15, 1894.

The Ideal Treatment of Acute Gonorrhea—Is It Justifiable?—BURNSIDE FOSTER recommends a button-hole opening in the perineum, through which the bladder is drained, in acute gonorrhea. The anterior urethera can then be properly flushed out from behind forwards, obviating the carrying backward of the gonococcus. The author candidly remarks: "I have never had the opportunity to adopt this method of treatment, which, should it be deemed advisable, would naturally have but a limited field."—*Journal Cutaneous and Genito-Urinary Diseases*, September, 1894.

The Hypodermic Injection of Mercurials in the Treatment of Syphilis—At the last meeting of the French Congress of Dermatology and Syphilography, held at Lyons, M. AGAGNEUR read an exhaustive report, *Union Médicale*, on the hypodermic use of mercury in the treatment of syphilis. He took a decidedly adverse view to its general use, stating that the indications for employing it were hard to determine. From his large experience and thorough investigation of the subject, he had come to the following conclusions: (1) The use of mercury by hypodermic medication in the treatment of syphilis should be reserved for a few exceptional cases, because of the inconvenience and dangers to which it exposes the patient. In this connection he emphasizes the great pain of the injections, the dangers of abcess formation, of sudden death from syncope, fat embolism and rapid mercurial intoxication. (2) It should be used only after careful deliberation in cases where it is needful to have large doses of mercury absorbed immediately, mainly in cases of cerebral syphilis. If this urgency for rapid absorption does not exist, the method of treatment should always be by injection or pills, one or both.

In the discussion which followed this paper, the opinion of the Congress seemed about equally divided for and against M. Agagneur's extreme views. M. STANKOWENKOW of Kiew strongly defended the use of soluble mercurials hypodermically. He had used the following formula in 200,000 cases, always with success. Its action was sure and rapid, and he had never seen a serious accident. His preparation, invariably used, is:

Benzoate of mercury	0 .25.
Chloride of sodium.	
Hydrochlorate of cocain	āā 0 .06.
Distilled water	30.

Of this he injects two grammes each day for a month; then waits two months, and again gives the same treatment, continuing it at longer intervals.

M. JULIEN also defended the hypodermic method. He used it in all grave and stationary lesions. He considered local abscess formation rare if the asepsis was rigid.

The sentiment of the Congress in closing the discussion was that, while the hypodermic method was not to be advised for general use, it nevertheless was an invaluable aid in hospital practice and in grave cases, and that the accidents emphasized in M. Agagneur's report might, in the majority of cases, be avoided by care and rigid asepsis.—*Boston Medical and Surgical Journal*, September 6, 1894.

MATERIA MEDICA AND THERAPEUTICS.

By WM. WATT KERR, M.A., M.B., C.M., Professor of Clinical Medicine, University of California, San Francisco.

Sozoiodol.—TEICHMANN has used sozoiodol in affections of the external ear accompanied by much discharge, and found the drying properties of the drug to be very satisfactory. It was also serviceable in chronic discharge of the middle ear, with destruction of the tympanum. Sozoiodol appeared to prevent the recurrence of aural polypi, but does not cause them to shrink or disappear. In caries the results obtained are better than those from any other remedy. In the various forms of rhinitis the potassium and zinc salts of sozoiodol are very effective. The latter may be somewhat irritating at first, but acts with astonishing rapidity. In the after treatment of operations on the nose, the author has now discarded iodoform, preferring the sozoiodol of potassium.—*British Medical Journal*, June 23, 1894.

Apocynum Cannabinum in Heart Disease.—A. G. GLINSKI, after having proved experimantally that the root of the apocynum cannabinum contains a poison which, in large doses, paralyses the heart, and when given in small doses retards and strengthens its beat, decided to take it himself, as he is suffering from hypertrophy of the left ventricle, with intercurrent attacks of dilatation of the organ, mitral murmur, dyspnea, etc. The dose was fifteen minims of the fluid extract three times daily. As he found that all his symptoms disappeared in two days, he gave it to other patients in the same quantity in cases of palpitation or deficient compensation, in which strophanthus and adonis vernalis had failed, and digitalis seemed contraindicated. The following is a summary of his experience: (1) The action of the root of apocynum cannabinum is similar to that of digitalis, without being cumulative. (2) In cases of dilatation, the fluid extract rapidly diminishes the area of dulness. (3) It increases the daily amount of urine, stops the palpitation, and promotes the absorption of transudations. (4) With the exception of increased pulsation of the arteries of the head, it has no bad secondary effects. The drug may be used either as a decoction (ʒi to ℥viii) three to four tablespoonfuls daily, or as tincture (1-10) m.xv, t.i.d, or fluid extract, m.x to m.xxx, t.i.d.—*British Medical Journal*, June 23, 1894.

The Treatment of Typhoid Fever.—DR. CLAUD MINCHEAD, in his "Edinburgh Hospital Report," gives an excellent epitome of the treatment of typhoid fever. Instead of locking up the bowels, he advises the administration of castor oil or calomel, if the patient has not had a movement on the previous day. He also regards calomel as an antiseptic, and recommends its use in doses of one grain, when an aperient is called for, combined with opium if it prove too active. Of the other antiseptics, benzo-naphthol, in sixteen grain doses every four hours, or half doses oftener, has proved, in his hands, the most efficacious. Another point which is strongly emphasized is the impropriety of insisting upon patients using the bed-pan, when the annoyance and straining incurred neutralizes the benefit; allowing them quietly to rise to the bed-stool, unless when the patient is very weak or hemorrhage is threatening, never has been followed by any unfortunate result in his experience. Diarrhea may be checked by liquor calcis, salicylate of bismuth, or Dover's powder with ipecacuanha. The antipyretic treatment is useless, but antipyrin now and then relieves the headache or other nervous symptoms. Turpentine in capsules may be given for the relief of meteorism, and also in hemorrhage, when it should be combined with morphin. For diet, milk, peptonized if necessary, and plenty of cold water; and for stimulant, whisky in warm milk or soda water, or again, in white of egg mixed with cold water to which a pinch of sugar is added. "If the patient tires of this, wine may be given—by preference the red wines—or light beer, *e. g.*, Pilsener."—*Medical Press and Circular*, July 18, 1894.

Chloral Hydrate in Hemoptysis.—J. PAL reports 15 cases which were treated for hemoptysis by injecting 15 or 25 grains of chloral hydrate into the rectum, and an effect was always produced within half to three-quarters of an hour. Several times repeated doses were given, and as a prophylactic the drug also seemed to be valuable.—*British Medical Journal*, July 14, 1894.

MEDICINE AND PATHOLOGY.

By ALBERT ABRAMS, M.D., Professor of Pathology, Cooper Medical College, San Francisco.

The Diagnostic and Prognostic Importance of Leucocytosis.—In an interesting and very suggestive article, DR. RICHARD C. CABOT, of the Massachusetts General Hospital, summarizes his investigations in this direction. Leucocytosis is not leukemia, though some still confuse the two conditions. The former is transitory, as a general rule, while the latter certainly is not. The percentage of white corpuscles does not distinguish one from the other, as leucocytosis may show as marked an increase in numbers as leukemia. The best definition thus far given of leucocytosis is this: Leucocytosis is the presence in the blood of an increased number of white cells of the same varieties morphologically as those in normal blood, an overwhelming plurality being polyneuclear. In leukemia, the polyneuclear cells are never increased and are generally in the minority. In leukemia, too, there are found very many large mono-neuclear cells. The importance of this differential point is readily seen when we consider the fact that a large increase of white corpuscles occurs with abdominal tumors, including splenic growths in which the corpuscles are overwhelmingly polynuclear. Again, cases of leukemia have been observed in which the normal number of white corpuscles existed, but the *character* was changed, the large, mono-neuclear supplanting the polyneuclear cells. The majority of observers now estimate the normal number of white corpuscles as 7,500 in the cubic millimeter, and any variation of 1,500 above or below is considered abnormal. Leucocytosis is found in a considerable number of physiological conditions, and due consideration must be given to this fact. During digestion, two and a half hours after a hearty meal, the increase is apt to be from 1,000 to 7,000 above the normal, and in some cases no leucocytosis is observed during digestion. Pregnancy and the puerperal state, in about two-thirds of the cases, show leucocytosis, as much as 14,000. Children.—The new-born show considerable leucocytosis, which gradually lessens till the sixth

year. Hemorrhage causes it also, the increase occurring just after a considerable loss of blood. Taking up diseases, the following conclusions are drawn from the hospital investigations: Most febrile diseases show leucocytosis, but the previous statements of some of the best authorities have been wholly incorrect regarding typhoid fever, the conclusions having been drawn from reasonings rather than from actual clinical observations. According to Dr. Cabot, the existence of this blood state in typhoid fever points to some complication, such as thrombosis, pneumonia, abscess, etc. The blood count, therefore, in temporary rises of temperature during typhoid, would be of importance as distinguishing a relapse from some complicating condition. In 79 cases of typhoid fever, blood counts were made; in 49 of them the number of white cells was sub-normal, and in the others normal. In many other affections which might be mistaken for typhoid, leucocytosis is found as local suppurations, purulent meningitis, thrombosis, pneumonia. Appendicitis, in some cases, closely resembles typhoid, and here leucocytosis would be found. In *la grippe*, those cases examined showed no blood change. In pulmonary tuberculosis and meningeal tuberculosis, no aid is given in different rating from typhoid by the blood-count. The same applies to malaria. The diagnosis of pneumonia from *la grippe*, and of the appearance of pneumonia with, as well as the prognosis in pneumonia, is greatly aided by the recognition of leucocytosis. Appendicitis gives leucocytosis when it is purulent. The diagnosis of this condition, from a colic due to constipation, is of great importance, because of the possibility of the rupture of an uncapsulated abscess, by giving a purge. In a doubtful case we may more confidently purge if the blood-count shows no leucocytosis. In cases of suspected purulent abdominal affections, the diagnosis of pus is warranted by the presence of leucocytosis. In osteomyelitis, otitis media, housemaid's knee, and several cases of arthritis, those showing leucocytosis turned out to be purulent, while those giving normal blood-count were non-purulent. After operations where the temperature rises, leucocytosis points strongly to pus-formation.—*Boston Medical and Surgical Journal.*

MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By A. W. HOISHOLT, M.D., Assistant Physician, State Asylum for Insane, Stockton, Cal.

A Case of Cortical Blindness.—Five new cases of cortical blindness have recently been published, one of which, reported by DR. H. MAGNUS of Breslau, is the following: G. B., 52 years old, well nourished, of regular habits, has had lues. Thirteen years ago he had a sudden attack of left hemiparesis and left homonymous hemiopia, during which he did not lose consciousness but showed a remarkable weakness of memory. These symptoms disappeared in the course of some weeks with the exception of the blindness of the left halves of the visual fields. Ten years after this attack a second one occurred, during which he lost consciousness for several days. The third attack, which followed the second after an interval of three years, set in while the patient was walking on the street. The symptoms were a right hemiopia, with loss of consciousness lasting but a short time and impairment of memory for recent events. No muscular paralysis was present. Three weeks after the attack the patient was seen by Dr. Magnus, who was told that the man was blind. It was found, however, on closer examination that a small central visual field in each eye was intact. The patient could distinguish several letters of the Snellen's tables with both eyes; with the right better than with the left. His eyes would oscillate to and fro, and it was only by chance that they would be fixed upon the letters, which made reading very difficult. It was impossible to test his field of vision with the perimeter; he could not even follow the finger with the eyes after touching the point of his nose to help him locate it. He could not locate objects, could not find his way about his room, describe familiar roads, houses, or name the number or position of the doors, etc., in his room. His optical memory was unimpaired; he recognized objects if he could see or feel them. He could reckon and write correctly. The ophthalmoscopic and physical examinations revealed nothing abnormal. A complete change in these symptoms took place eight weeks afterward; his eyesight improved, and the greatest acuity of vision, instead of being central, was found to be excentric, as indicated by the patient rotating the eye-balls inward and downward. His sense of color was found normal. Symptoms of dementia were developing. This history points to a cortical lesion. The remarkable disturbances of topography and inability to locate objects have been observed in other cases in connection with cortical blindness, and it has been proved that double homonymous hemianopsia by no means always entails complete loss of the eyesight; but that sometimes a small central field of vision retains its function.—*Deutsche med. Wochenschrift—Journal of Nervous and Mental Disease.*

Modern Treatment of Idiocy.—According to BOURNEVILLE, idiocy occurs as a symptom of the following diseased conditions: Hydrocephalus, arrested development of convolutions, congenital or pathological malformations of the brain, meningitis or meningo-encephalitis, hypertrophic cerebral sclerosis, atrophic sclerosis, myxedema and cerebral tumors. Bourneville has published the results of a comparative study made by him of the skulls and photographed brains of 22 idiotic children, whose feeble-mindedness was dependent upon different causes, and who had died of a variety of diseases. The age of the children averaged from two to seventeen years; they were all typical idiots and they belonged to the same category as the 25 patients operated upon by Lannelogue. Bourneville's conclusions from his observations differ in certain particulars from those of other observers. He lays, especially, stress upon the following points: The surgical treatment of idiocy rests upon a hypothesis not substantiated by pathological anatomy. In the different forms of idiocy, premature ossification of the cranial sutures does not exist. Partial synostosis is quite exceptional. Lesions causing idiocy are generally profound, extensive and varied, and most unlikely to be influenced by craniectomy. Our present means of investigation are not such that a diagnosis of premature ossification and thickness of the skull can be made. Reports of most surgeons show that results of operations are negative, slight or doubtful. Serious accidents, as paralysis, convulsions or death, may follow surgical interference. Medico-pedagogic treatment, founded by Seguin, and improved by the introduction of new processes, always permits a decided amelioration, and often enables idiotic children to occupy some social station. This medico-pedagogic treatment has been greatly improved upon by Bourneville. The children are first taught to stand erect, to walk properly, to wash their faces and hands, to dress themselves, to lace their shoes, and perform other complicated acts. These object-lessons are given upon the manikin or upon one of the little patients. The joints are exercised, the muscles are rubbed, baths are administered and a general hydrotherapy employed. For the development of speech and correct pronunciation, methods in vogue in deaf and dumb asylums are utilized. Every device is employed to render numbers and calculations real and intelligible. The training of vision is carried on out of doors, in gardens or plots laid out with this object in view. Music occupies an important place in this scheme of mental and moral development. There are songs and movements, games and lessons in vocal and instrumental music for the advanced pupils. Physical culture is carried on by means of systematized mechanical movements, gymnastics, fencing and dancing. Technical training for a trade completes the course of instruction. There are seven workshops. The pupils learn carpentry and locksmith work, printing, tailoring, the making of shoes, baskets, brushes, twine, etc. Bourneville calls attention to the fact that many backward and imbecile children are moral imbeciles. They are unstable, perverse, impulsive, disorderly and wayward. They reach a certain stage of development, a moderate intellectual capacity; the moral qualities are in abeyance; and moral imbeciles have as much mind as is consistent or possible with a total absence of character.—*Progrès Medical—Journal Nervous and Mental Diseases.*

FORMULÆ.

By Geo. B. Somers, M. D., San Francisco, Cal.

Freckles.—

White precipitate of mercury.	
Subnitrate of bismuth	āā gr.xx
Spermaceti.	
Yellow wax	āā ʒi–℈ii
Almond oil	ʒiiiss

S.—To anoint the affected parts. Repeat the frictions eight successive nights.—*Nouveaux Remèdes.*

Toothache Drops.—B. H. Brodnax prescribes:

Camphor.	
Chloral.	
Glycerin.	
Carbolic acid	equal parts

S.—Apply to cavity on cotton after cleansing.

Earache.—B. H. Brodnax orders:

Chloral	gr.x
Camphor	gr.x
Carbolic acid	gr.x
Castor oil	℥ss

S.—Warm and drop into the ear until ear is full. Then apply piece of cotton wet in warm water to external ear, and cover the whole with cloth wrung out of hot water.

Bromoform in Whooping-Cough.—Carpenter recommends:

Bromoform	m.xlviii
Alcohol	℥iv
Tr. card. comp.	*ad* ℥iii

S.—Teaspoonful in water three times a day for a child two to four years old.—*Philadelphia Polyclinic.*

Chronic Bronchitis.—

Ammonii chloridi	gr.xv
Ammon. carb.	gr.xv
Pulv. ipecac	gr.iii
Morph. hydrochlor.	gr.i
Mucil. acaciæ	q.s.

Divide into ten pills.

S.—One night and morning.—*Medical Press and Circular.*

Lubricant for Urethral Instruments.—Guyon uses:

Glycerini	ʒvii
Hydrarg. perchlor.	gr.¼
Saponis mollis	℥ii
Aq. dist	ʒvi

This preparation is antiseptic and causes no irritation to the urethral canal.—*Medical Press and Circular.*

Method of Administering Diuretin.

Natrio. salicylate of theobromine	gm.4-6
Peppermint water	gm.100
Distilled water	gm. 90
Simple syrup	gm. 10

S.—To be taken in one day, two tablespoonsful at a time, every two or three hours.—*Nouveaux Remèdes.*

Antirachitic Powder.—

Precipitated carbonate of lime	gm. 32
Phosphate of lime	gm. 15
Lactate of iron	gm. 3
Lactose	gm. 50

S.—Place in a half liter of milk as much as can be held on the point of a knife.—*Nouveaux Remèdes.*

Creosote in Phthisis.—S. Solis Cohen gives:

Creosoti (beechwood)	m.xxx-lxxx
Tinct. cardamomi	℥iv
Glycerini	℥ii
Alcoholis	*ad.* ℥iv

S.—Two teaspoonfuls in water after meals.

Hepatic Stimulant.—

Euonymin	gr.ii
Pil. colocynth. co.	gr.ii
Ext. hyoscyami	gr.ss

To make one pill.

S.—One or two at bedtime.

Guaiacol.—

Guaiacol.
Tr. gentian. comp. āā
equal parts

This mixture may be administered in ten-drop doses in milk before meals.

Phthisis.—

Creosoti	m.vii
Iodoformi	gr.vi
Acidi carbolici (cryst.)	gr.viii
Ol. therbromæ	q.s.

Divide into thirty pills.

S.—One pill every three hours.

PUBLIC HEALTH.

By W. R. Cluness, M.A., M.D., San Francisco, Cal.

Mortality for August, 1894.—The deaths registered in 75 town districts of the State, during the month of August, in a population of 777,053, correspond to an annual rate of 15.36 a thousand, the total mortality having been 1002. 107 deaths were due to zymotic diseases, giving an annual rate of 1.56 a thousand. Of these, 9 were due to diphtheria, 23 to cholera infantum, 33 to typhoid fever, 16 to diarrhea and dysentery, 7 to cerebro-spinal fever, 6 to whooping cough, 7 to croup, 5 to intermittent and remittent fevers, 1 to scarlet fever, 0 to measles, and 0 to small-pox. 235 deaths resulted from diseases of the respiratory organs, giving an annual rate of 3.62 a thousand. Of these, 163 were due to consumption, 41 to pneumonia, 26 to bronchitis, and 5 to pulmonary congestion; the rate being, for consumption and pneumonia, 2.52 and .62, respectively. 76 deaths resulted from diseases of the heart, 6 from alcoholism, 4 from erysipelas, 35 from cancer, and 445 from causes not given. The average annual death rate from all causes occurring in the ten largest cities and towns in the State, and representing a population of 589,000, was 16.08 The highest rate for the month occurring in cities having a population of 10,000 or more inhabitants, was reported from San Francisco, the lowest from Fresno and Berkeley.

METEOROLOGY.

Summary for August.—*Temperature.*—The normal temperature of the State for August is 74°, the average for August, 1894, was 75°; a departure from the normal of +1°. The highest monthly mean was 99°, at Salton, in the desert regions of San Diego county; the lowest, 54°, at Point Reyes. The maximum temperature was 120°, at Volcano Springs, on the 1st, in the desert regions of San Diego county; the minimum 35°, at Boca, in the high mountain regions of Nevada county, on the 12th. The absolute monthly range was 85°; the greatest local monthly range was 68°, at Escondido; the least, 31°, at Eureka.

Rainfall.—The normal precipitation of the State for July is 0.03 inches; the average for August, 1894, was 0.05 inches; a departure from the normal of +0.02 inches. The greatest monthly precipitation was 1.45 inches, at Meadow Valley, Plumas County; the least, nothing, at a number of stations.

Wind.—The prevailing direction of wind was westerly.

Unusual Features.—The unusual meteorological feature of the month was the great number of thunder and lightning storms throughout the State; there having been fifteen different storms noted, some being quite severe.—James A. Barwick, Director California Weather Service.

California—Tabular Statement for August, 1894.

STATIONS.	TEMPERATURE.						RAINFALL.		Mean Relative Humidity	WEATHER.			WIND.	FURNISHED BY—
	Mean	Highest	Lowest	Mean Highest	Mean Lowest	Mean Daily Range	No. of Days Rain Fell	Total Rainfall		No. of Clear Days	No. of Fair Days	No. of Cloudy Days	Prevailing Direction.	
Auburn ....Cal.	82.0	106	60 0	------	------	------	1	T.	------	----	----	----	E.	Southern Pacific Company.
Berkeley......... "	59.0	93	47.0	71.0	55 0	16.0	0	0.00	86 0	19	8	4	S.	Obs. University of California.
Colfax............ "	84.0	104	58.0	------	------	------	1	0.03	------	----	----	----	N.E.	Southern Pacific Company.
Eureka........... "	57.0	79	48.0	62.0	53.0	9.0	1	0 04	90.0	6	10	15	N.	Weather Bureau Dept. Agr.
Fresno........... "	82.0	109	55.0	99.0	65 0	34.0	3	T.	36.0	26	5	0	N.W.	" " "
Indio............. "	90.0	114	80.0	------	------	------	0	0.00	------	----	----	----	W.	" " "
Los Angeles.... "	70.0	97	52.0	82.0	58.0	23.0	1	0.01	78.0	9	22	0	W.	" " "
Monterey .... "	62 0	86	50.0	------	------	------	0	0.00	------	----	----	----	N.W.	Southern Pacific Company.
Napa........... .. "	69.0	102	51.0	80.0	58.0	22.0	1	0.04	70.0	12	17	2	S.W.	Station Napa Insane Asylum.
Oakland.......... "	59 0	90	45.0	72.0	54.0	18.0	0	0.00	84 0	13	11	7	W.	Chabot Observatory.
Paso Robles.... "	73.0	105	40.0	91.0	54.0	37.0	1	0.05	34.0	29	1	1	W.	Agr. Ex. Station.
Red Bluff....... "	82.0	110	60.0	98 0	66.0	31.0	1	T.	37.0	26	5	0	S.	Weather Bureau Dept. Agr.
Sacramento. ... "	75.0	108	50 0	91.0	58.0	33.0	2	T.	59.0	0	28	3	S.W.	" " "
San Bernardino "	75.0	102	41.0	92.0	59.0	33.0	2	0.16	------	----	----	----	--------	A. K. Johnson, M. D
San Diego....... "	67.0	90	55 0	79.0	62.0	11.0	1	0.04	82.0	23	5	3	W.	Weather Bureau Dept. Agr.
San Francisco.. "	59 5	91	49.0	65.0	53.0	12.0	0	0 00	87 0	14	11	6	S.W.	" " "
Santa Barbara.. "	66.0	90	54.0	73.0	58.0	15.0	0	0.00	76.0	20	9	2	W.	Hugh D. Vail.
Santa Cruz...... "	65.0	101	46.0	77.0	54.0	23.0	1	T.	------	20	6	5	W.S.	W. R. Springer.
Yuma...........A. T.	90.0	110	66.0	103	77.0	26.0	2	0.10	47.0	15	16	0	S.W.	Weather Bureau Dept. Agr.

Average humidity at Paso Robles is at 2 P. M. T. means a trace of rain. Blank (----) indicates data missing.

Occidental Medical Times.

Communications are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

Sacramento: October, 1894.

A PROPOSED AMBULANCE ASSOCIATION FOR SAN FRANCISCO.

A movement is on foot in San Francisco for the formation of an ambulance association. It is understood that the objects in view are principally to improve the local emergency service, and to spread the knowledge of "First Aid to the Injured." The name "Red Cross" has been used in connection with the proposed society. If the objects are simply as stated, the employment of this title would hardly be appropriate. The scope of Red Cross societies is very distinct. There is an American Association of the Red Cross, with headquarters at Washington, the leading spirit of which is Miss Clara Barton, the American Florence Nightingale. This association is a branch of an international organization instituted at Geneva in 1863. Its original object and scope were limited entirely to ambulance work in connection with the army and navy; but as the United States branch could not, for obvious reasons, support an *active* society in connection with its army and navy, it was allowed by special modification of the international treaty to extend its work to affording relief in cases of national calamity, such as floods, fires, earthquakes, pestilence, etc. On the other hand, there are in Scotland and England two associations devoted to local ambulance work, whose objects cover the grounds of the proposed association. These are the St. Andrew's Ambulance Association of Glasgow, and the St. John's Ambulance Association of London. There is, then, a distinct difference between a Red Cross society and an ambulance association. The one is national and militant, the other local and educational. The idea at the bottom of the ambulance movement is admirable. The work in England and Scotland has proved its practicability. There the associations have been the means of imparting instruction in "first aid" to thousands of people, with excellent practical results. In directing attention and interest to this subject, not only is the educational influence on individuals excellent, but reflexly the public institutions must be the gainers thereby. Probably the chief causes of the inefficiency of public charities are the lack of knowledge concerning them and the lack of interest in them. An active ambulance association could not but arouse interest in the public ways and means of caring for the sick and injured; and once the knowledge of the needs and workings of the public charities become general, the demands for higher standards of efficiency will soon follow.

NOTES.

Mississippi Valley Medical Association.

The twentieth annual meeting of the Mississippi Valley Medical Association will be held at Hot Springs, Arkansas, November 21st, 22d and 23d. Many valuable papers have already been promised, and it is confidently stated that the success of the meeting is already assured. The month of November is usually one of the pleasantest of the year at Hot Springs, and the local physicians, together with the citizens, have united to offer the Association a hearty welcome. Substantial reductions in railroad rates have been assured, and these will be announced later.

Fairchild Bros. & Foster.

On the evening of July 29th, Messrs. Fairchild Bros. & Foster, the well-known manufacturers of digestive ferments, were burned out of the offices and warerooms which they had long occupied at Nos. 82–84 Fulton street, New York. The second day after the fire quarters were secured in the Rhinelander Building, where even better facilities were afforded for the transaction of their extensive business. The firm have issued a circular to their friends, expressing their hearty thanks for their forbearance with orders delayed or only partially filled, which was unavoidable with such an interruption to business. They are now prepared to give matters prompt attention, and have an ample stock on hand. This firm is one whose dealings with the profession have always been satisfactory, and there are few physicians who are not familiar with the products that they have done so much to improve and perfect.

Kentucky School of Medicine.

The thirty-ninth annual session of this flourishing school will begin January 3, 1895, continuing for six months. The Faculty have recently completed numerous improvements in connection with the school that will greatly add to its facilities. A large hospital, which will be one of the most complete for surgical work in this country, has been erected adjoining the college, and will soon be ready for the reception of patients. Extensive improvements have also been made in the laboratories, and during the ensuing session the facilities for clinical and laboratory instruction will be equal to any western school. Attendance is required upon three graded courses of six months, in three separate years. This school is a member of the Southern Medical College Association, but its requirements are more rigid than the standard of the Association demands. At the graduating exercises, in June last, the class numbered 188.

California Northern District Medical Society.

The fourth annual meeting of the California Northern District Medical Society will be held in Marysville, Tuesday, October 9, 1894. The Committee of Arrangements, consisting of Drs. David Powell, G. W. Stratton, T. P. Peery, A. E. Kosby and E. E. Stone, have been at work for some months past, and there is every reason to anticipate a very successful meeting. A circular letter has been issued to the physicians of Northern and Central California, pointing out the scope of the Society and urging a large attendance. The Society will convene in Masonic Hall, and will be welcomed by the Mayor of the city. There will be three sessions, the morning session opening at 10 A. M., when the annual address will be delivered by the President, W. A. Briggs, of Sacramento, and the afternoon and evening sessions, at 2 and 7 P. M., respectively. It is expected that the business of the afternoon session will be concluded sufficiently early to permit of the visitors seeing some of the beautiful surroundings of the city. The evening session will be devoted to the miscellaneous business of the Society, including the election of officers for the ensuing year. After adjournment, there will be a banquet at the New Western Hotel, tendered by the Medical Society of Yuba and Sutter Counties. The following are the titles of papers, with their authors and the names of those who will open the discussions: "When and How Shall We Apply the Obstetric Forceps?" W. R. Cluness, San Francisco; W. R. Cleaveland, Biggs. "Chronic Interstitial Nephritis," J. Ellis Rodley, Chico; G. W. Stratton, Marysville. "The Dietetic and Therapeutic Management of Typhoid Fever, Thos. Ross, Sacramento; O. Stansbury, Chico. "The Foothills of the Sierras in the Climatic Treatment of Bronchial and Pulmonary Diseases," R. F. Rooney, Auburn; F. W. Benjamin, Oroville. "Tenorraphy," T. W. Huntington, Sacramento; W. E. Bates, Davisville. "Head and Brain Injuries," S. J. S. Rogers, Marysville; W. W. Macfarlane, Woodland. "Gangrene of Scrotum and Penis," T. W. Serviss, Oroville; O. C. Hawkins, Biggs. "Strabismus, with Especial Reference to Its Early Recognition and Treatment," W. E. Briggs, Sacramento; C. H. Gibbons, Arbuckle.

"The Microscope in the Diagnosis of Enteric Fever and Tuberculosis," S. M. Mouser, San Francisco; J. R. Todd, Gridley. "The Treatment of Gonorrhea by Retro-injections," W. J. Hanna, Sacramento; N. Watts, Chico.

Folle à Deux.

This curious form of insanity seems to be rare. It is a form of induced insanity, and occurs where one person suffering from some delusion or hallucination has influence enough to develop in another the same form of trouble. Favorable conditions for the occurrence of *folie à deux* are similar predisposition, long-continued and great intimacy of the two patients, and lastly plausibility of the insane ideas. The case of the two Schaefer women, mother and daughter, who were recently committed to an asylum from San Francisco, appears to have been one of this nature. The mother became possessed of the idea that she could aid the police department in solving the mystery of the celebrated Jacobson murder. She was given a careful hearing by detectives, but after thorough investigation she was deemed to be suffering from an hallucination, though she was apparently rational on other topics. For some time she ceased to trouble the police, and was not heard from until some months later, when a prominent lawyer began to receive letters from her daughter, containing threats, rambling remarks about the Jacobson case and allusions to a promised marriage. The daughter was arrested and charged with insanity. While under detention in the San Francisco Receiving Hospital the mother visited the daughter, and, when questioned by the physician in charge, maintained stoutly that her daughter was suffering from no delusions, but was stating nothing but facts. The delusions, however, were plainly apparent, and the physician recommended that the mother likewise be charged with insanity. When brought before the insanity commissioners the patients demanded a jury trial, and a lawyer, who rides insanity cases as a hobby, volunteered to defend them. After a vigorous defense by the attorney the jury disagreed, and the judge dismissed the case. Three days later this same attorney, having allowed himself due time to enjoy his victory, appeared before the judge with the petition that the dismissal be vacated; that his clients be taken into custody once more, and that they be committed to an asylum in due form, all of which was forthwith done.

SOCIETY PROCEEDINGS.

SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

Regular Meeting, August 21, 1894.

The President, W. F. WIARD, M.D., in the Chair.

The Use of Tobacco by the Medical Profession.—DR. W. F. WIARD read a paper on this subject. He entered at length into the numerous abuses caused by the general use of tobacco, illustrating his conclusions by cases in point. Authorities were agreed that the cause of these troubles was the excessive use of the weed, or its employment by persons who, under any circumstances, were unable to withstand its effects. The injurious results were so obvious that it was, to him, incomprehensible that medical men should indulge in so pernicious a habit, when daily reminded and fully cognizant of its evil results, and constantly reminded of them by pathological examples. The author said medical men should, in their personal conduct, their habits and their morals, be an example in the community. They should, therefore, avoid all debasing influences, as well as anything that tended to lower the esteem in which they were held by their patients. In conclusion, he drew a vivid picture of the tobacco-smoking and tobacco-chewing physician, whose person, reeking with the aroma of stale tobacco, and whose clothing, besmeared with the profuse expectoration of tobacco chewing, could hardly fail to be an object of disgust to his unfortunate patients.

DR. C. E. FOWLER said: At one time Blaine was opposed to the tariff on tobacco, from the fact that he found nearly every laboring man smoked after meals, and he had come to the conclusion that tobacco was almost an absolute necessity. The speaker confessed that he was one of the sinners. Physicians had bad habits, like other people, but he agreed with the author that, from a high moral standpoint, a physician should not indulge in the use of tobacco. It was not from the use, but rather from the abuse, of the weed that we find the conditions of nervous irritability so frequently met with.

DR. THOS. ROSS thought the paper was an exaggeration. No physician could point to a single case of death caused directly from smoking. The use of tobacco was very general, both by rich and poor, and there was certainly something in it for which the human system craved. He thought that physicians smoked from the sense of comfort that it gave; being compelled to look so much at the dark side of things, that, when tired and worried, it was quite natural to take up the pipe. Tobacco has a soothing effect which is not produced by anything else, and there is nothing that will give a man the same pleasure as a good cigar. Every one present had, no doubt, seen cases of insomnia and indigestion, due to the excessive use of tobacco, but the trouble always passes away as soon as the cause is removed.

DR. J. H. PARKINSON: I am one of the non-smokers, and have, therefore, some hesitation in criticising the paper. I do not believe that moderate indulgence in tobacco is injurious, but it can hardly be denied that tobacco smoking, and especially tobacco chewing, are dirty habits. Every man must decide for himself whether he will use tobacco, but I believe that the odor of tobacco smoke is offensive to many persons when well, and to a still larger number when sick. I certainly think that physicians should neither smoke in their offices, nor permit others to do so when it is possible to prevent it.

DR. G. A. WHITE: There is much to be said for and against the habit. People through the South use tobacco more than those residing in the Northern States. In the University of Virginia, inquiry showed that only three per cent. did not use tobacco, while in the University of Vermont not quite three per cent. used it. Personally, he had used tobacco for twenty-five years, but he had been compelled, possibly from cardiac weakness, to abstain. During the last two or three years, he had again commenced to use it. Its effects had sometimes been very unpleasant, and he remembered, on one occasion, after a meeting of the Society, where he had been unable to operate, owing to the depressing effects of over indulgence which, in his case, resembled an overdose of jaborandi. People of a phlegmatic temperament can stand much larger quantities of tobacco than others, but there are very few who can use it to any extent and escape its ravages.

Dr. D'A. Power believed that every man should use tobacco according to his own particular case. He had certainly seen deaths that were due to tobacco poisoning, the diagnosis being based upon the exclusion of all other causes. In one case, that of a man who smoked and chewed excessively, the patient had frequent attacks of syncope, and finally died of dilatation of the heart. Improvement followed when the tobacco was discontinued, but the patient finally died from congestion of the lungs. Many of the minor ills, such as atonic and nervous dyspepsia, are relieved as soon as the patient quits smoking. In some cases no harm follows because the system becomes habituated to the use of the drug. Physicians should certainly not use tobacco, for we certainly cannot expect that others will refrain from its use when we do not abstain ourselves.

Dr. H. W. Strader had used tobacco on and off for seventeen years, but had not smoked during the past three months. He thought that tobacco, like many other things, should be used with moderation. It was a stimulant and a vaso-motor sedative to the spinal nervous system. There are certain people to whom the use of tobacco is injurious. In his experience he had never been able to diagnose a case of tobacco heart, and he believed the effects of tobacco on that organ were only temporary.

Dr. W. E. Briggs: The habit of smoking is certainly repulsive, and its effects are certainly bad. With intermission he had smoked for about ten years, during which time he thought it had had but little effect upon his health. There was no question that a man was a better physician without the habit. He had seen many ill effects from the drug, most prominent amongst which was amblyopia. It had always a bad effect upon the throat and nose. Regarding the influence of tobacco upon the brain in relation to study, he did not think that this view was borne out by practical experience. In Germany smoking was almost a universal habit. He had never seen a professor or a student that did not smoke; and in view of the scientific results attained by the German nation it did not seem that this theory of its malign effects could be maintained.

Dr. M. Gardner: By far the greater amount of injury is caused by the quality of the tobacco that is used. In the navies of the European nations every sailor is allowed so much tobacco. This tobacco is a twist made from the pure leaf, and is not injurious. It could hardly be supposed that all the great powers would knowingly sanction the use of anything tending to lower the efficiency of their men.

Dr. J. R. Laine: All nations make use of some sedative or stimulant. Savages use tobacco, smoking it and inhaling the smoke. The injurious effects of tobacco must be determined by comparison. When a man's powers are impaired and he becomes decrepid, it is quite usual to blame this upon something bad. Tobacco was injurious to the speaker; even one cigar sometimes producing the characteristic symptoms of nicotine poisoning. He did not believe in physicians setting themselves up as examples in the community. The public would usually choose what they saw fit from the profession and no more.

Dr. H. L. Nichols said his experience in smoking had been limited to one cigar of moderate cost, that he had used many years ago. He was unable to use tobacco, and therefore made no virtue of abstention. He regarded it, however, as a filthy habit, and believed that it was the cause of very many injurious results.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, August 14, 1894.

George Chismore, M.D., in the Chair.

American Medical Association.—Dr. Henry Gibbons, Jr., Chairman of the Sub-Committee on Finance, as a member of the County Society's Committee on Entertainment, reported a balance of $675.15 remaining on hand.

The Plague Four Hundred Years Ago and Now.—Dr. S. S. Herrick read a paper on this subject. He exhibited to the Society a book printed at Venice in 1493, the name of the author being Alessandro Benedetto, a physician of Verona, which treated of the plague at that time. The author's paper consisted of abstracts from this ancient work, together with his comments thereon.

Benedetto believed that the causes of this malady were various, some embracing contamination of the atmosphere through the pestilential influence of the planets; the breath of a certain dragon was also mentioned. The only rational cause cited, on the authority of Galen, being the exhalations from bloody fields of battle. Regarding the means of infection, he notes, as remarkable, that woolen garments especially preserved contagion, and cites an instance of an infected feather bed which several years later caused an outbreak of the disease. Omens and signs portending to pestilence were given due prominence. Regarding treatment, he had observed that vomiting was injurious. The bowels were ordered to be kept open, manna, amongst other remedies, being recommended for that purpose. As a prophylactic, he mentions that Galen, during the plague of Rome, used a syrup prepared from vipers, in winter. It was protective to all who drank it. "The symptoms of pestilential fever" seem to present a fair clinical picture of the disease, many of the symptoms being clearly stated. The "unmistakable signs" given are tumors of the fauces, ears, axillæ and groins, which he terms carbuncles; these, coupled with loss of consciousness. On the first or second day, a rapid pulse, persistent vomiting, foul urine and jacitation were sufficient to recognize the fever beyond a reasonable doubt. Various vegetable remedies, under the titles of simples and compends, are mentioned as having proved very effective. The quotations closed with some extracts from a chapter on tumors of the axilla and groin. This subject, Benedetto parenthetically remarks, may seem foreign to the physician, because it involves surgery, but it is obvious that the patient could not be restored to health without external treatment. Free suppuration is regarded as an element of safety. In connection with poultices, the use of which he condemns, as tending to drive the poison back on the internal organs; he mentions an excellent plaster used by the Greeks, and truthfully named "septic." This was made from the root of the narcissus, beeswax and pigeon's dung. Finally, if the tumors failed to yield to various remedies and counter-irritants, the author states, resort must be had to the knife or the hot iron. Dr. Herrick, in commenting on the foregoing, observes that the status of medical knowledge at the end of the 15th century had not much advanced beyond that of A. D. 650, as represented by Paul of Ægina, nor had much been added since the time of Galen, A. D. 131. In fact, most that had been accomplished by the schools between these periods was the preservation of the knowledge already acquired. Quoting from ancient authorities, he showed that bubonic plague had been prevalent in Lybia, Egypt and Syria at least 200 years B. C., and that this disease was similar to the epidemics which subsequently devastated Europe. There was no reasonable doubt that the malady prevailing at Hong Kong and Canton during the present year was bubonic plague. The disease had not hitherto been studied upon modern methods of precision, but analogy strongly indicates that some microbe is the cause, and the persistence of the poison is due to spores of strong vitality. The danger of infection reaching this country would lie mainly in the personal effects of the Chinese passengers, and in view of the action of this government in placing medical inspectors at European ports, it would seem proper that similar action should be taken at Hong Kong.

DR. C. G. KUHLMAN: I take this opportunity to point out certain features in connection with the so-called bubonic plague as described in this paper, and from what I ascertained in regard to it as it now exists in China, and with special reference to its relation to so-called leprosy. It was generally held that the lepers now scattered over various parts of the world, especially Europe, are pathological disseminations of the great bubonic plague epidemic which swept over every part of the earth during the thirteenth century, having been brought into Europe by the Crusaders who fled from Asia before the conquering Saracens. While it is true we are not familiar with the etiological factors concerned in either process, still, owing to the great dissimilarity in the pathology and symptomatology of the two diseases, we are, I believe, justified in assuming that there is no analogy whatsoever between them, and that the theory cannot stand scientific criticism. Leprosy ranks with syphilis, tuberculosis, and actinomycosis; it belongs to the pathological class—granulomata. It is an exceedingly chronic disseminating adeno-dermatitis confined entirely to the skin, and from all appearances commences at the distal ends of the upper extremities in the fingers and hands by a process of granulation necrosis, from whence it ascends by way of the cutaneous lymphatic system. It seems to be a disease of occupation of those who inhabit the shores bordering upon bodies of salt water and who are constantly engaged in handling salt fish. This view is held by many able physicians who have had ample opportunity to observe and to treat the malady, daily, for years. Leprosy cannot be regarded as contagious and infectious in the ordinary sense of these terms. The deep glands are not affected by leprosy, nor does it affect the various functional organs of the body. The patients die from other causes. The most we can assume for leprosy is invasion of the organism by a microbic form whose physiological products are capable of transforming the cutaneous lymphatics into granulation tissue. The pathology and symptomatology of bubonic plague present a typical picture entirely the reverse of leprosy. Here we have an entirely acute septic process with systemic invasion affecting not only the deep glands, giving rise to bubo, but also producing metastasis, malignant pustular eruptions and capillary hemorrhages, attended with fever, vomiting, purging, hematemesis, and pneumonia. While cholera has invaded Europe several times, it is very doubtful that the bubonic plague, which seems to depend upon certain emanations from the earth, most likely carbonic acid, did ever reach there, for there is no analogy between it and leprosy, either pathological or symtomatic, to justify us in assuming that the one was the outgrowth of the other.

Dr. D. W. Montgomery said he had a bubo from a patient in Hong Kong, received through the kindness of Dr. Geo. Tait, but on account of the decomposing condition of the specimen he could not stain in the cells. The plague affects the inguinal glands. Soldiers delegated for sanitary work in Hong Kong found three feet of dirt on the floors of the houses, being the accumulations of years. Regarding the "fish theory" of leprosy, the speaker did not believe there was anything whatever in it.

Dr. Herrick, in replying, said the plague is also known as the pestilential fever; it is not similar to, nor associated with, cholera.

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, July 21, 1894.

The President, John F. Morse, M.D., in the Chair.

Leprosy.—**Dr. D. W. Montgomery** demonstrated a case of leprosy, which had kindly been placed at his disposal by Dr. Dudley Tait. The patient, a Chinaman, 25 years of age, had acquired syphilis five years ago. One year ago, an erythematous patchy rash, similar to that now existing, broke out on both sides of his face. This cleared up on the right side, but persisted, although lessened in extent, on the left side. Six months ago, it again spread, involving both sides of the face. On carefully looking over the lesion, a lepra tubercle was discovered on the margin of one of the patches on the cheek, out of which some serum was pressed. Smear preparations of this serum stained with carbol-fuchsin, and bleached with nitric acid (⅓) showed lepra bacilli.

The President inquired whether it was a settled fact that the bacilli were the cause of leprosy?

Dr. Montgomery: It has not been scientifically settled; we only know that the bacilli are found in the tubercular form, the tubercles containing an immense number of them. They stain more easily than the tubercle bacilli. In the erythematous variety they are hard to find. I have cut section after section in such a patch and found none. In one instance, however, in 1892, Dr. Looft found them in an erythematous lepride. The bacilli were found clumped together; he considered the demonstration of their presence an absolute diagnosis.

Dr. N. Rosencranz: I have an interesting case of pemphigus lepræ, a universal pemphigus. The demonstration of the bacilli was a failure, however. The speaker asked Dr. Montgomery whether he had had success from any line of treatment, and if he had used spermine injections, which are highly spoken of.

Dr. Montgomery: I have seen the erythema disappear under the treatment, but it will do so without treatment. I have used salol, also salicylate of sodium—the latter is one of the very best drugs for lepra fever. The experience of Hanson points that way, and I have seen it act promptly when other drugs failed.

Cancrum Oris.—Dr. J. W. Williamson presented the photograph and reported a case of cancrum oris. He said: This trouble seems to be very rare here; I have never seen a case in my private practice, nor have quite a number of medical men with whom I have spoken regarding it. The patient is a girl 5 years old, an inmate of a charitable institution; concerning the child's family history and antecedents I know very little, except that she was taken, with a younger sister, from a squalid tenement in the lower part of the city. The father is in poor health and the mother is an inmate of an insane asylum. The child was brought to me about three weeks ago and was then suffering from an ulceration of the outer surface of the gums and inner surface of the cheek. This was cauterized and an antiseptic mouth-wash ordered. A week and a half later, the characteristic dusky blue spot appeared on the cheek, and two days later a slough as large as a dollar had separated from the surrounding tissues. The patient was anesthetized and the gangrenous tissues removed by the curette. The teeth were loose and the upper maxilla necrosed, the curette passing directly into the antrum. Large masses of gangrenous tissue were also removed from beneath the molar bone. After curettement the tissues were cauterized with pure carbolic acid and the opening packed with iodoform gauze. On the morning after the operation, the child was sitting up in bed playing with her toys, and calling for food. She appeared to have no pain and her mental condition was as bright as usual. Since then the edges of the opening in the cheek have been covered with red, healthy-looking granulations, but large sloughs have been dropping out of the anterior part of the temporal fossa and the child herself has pulled out several loosened teeth. Two days ago, another dusky spot appeared on the temple about half an inch behind the external canthus, and I presume the tissues in that neighborhood will be involved with the same rapidity as those lower down on the face. The literature on the subject gives a gloomy prognosis. I have read the statement that the disease is due to a specific bacillus, but Dr. Montgomery tells me he has never seen any of the cultures.[1]

Dr. Dudley Tait: I have seen a few cases occurring in children's hospitals. It is claimed that it occurs most frequently after roseola and in children of a scrofulous tendency. It is quite impossible to limit the result of the gangrene. A case came under my observation, a year or so ago, in which half the face became gangrenous, and, notwithstanding prompt measures, death resulted. I think it remarkable in this case that the bone was involved. As to the cause, I think that any necrotic condition which produces a thrombus would bring about just such a result.

Cancer of the Uterus.—Dr. H. Kreutzmann exhibited two specimens of malignant disease of the uterus in the early stages, and gave the following histories: Case I.—Mrs. R——, aged thirty, came to the Polyclinic complaining of some abdominal trouble. She had borne several children—the last, three years ago. On examination, a very peculiar-looking cervix was brought to view. There were two deep lacerations with considerable scar formation. The patient was sent to the hospital to have the scars excised and the tears united. On operating, a piece of very suspicious tissue was cut into and removed. Some slides were prepared from it by Dr. F. A. Grazer and sent to Dr. D. W. Montgomery for examination, who reported that in one of the slides he had found some nodules of epithelium in the connective tissue. This was a symptom of cancer, which ought to be acted on immediately, if the best results are to be expected. Acting upon this report the uterus was extirpated a week ago. Case II.—The second case reported was that of Mrs. R——, who came to the German Hospital, complaining of a burning pain or sensation in the womb. On examination, the uterus was found retroverted; there was also a hardening in the left broad ligament, and right at the external os was a small, warty growth. A piece of the cervix, including this growth, was excised and sent to Dr. Montgomery, who found the mucous glands dilated, and rounded, warty growths, composed of embryonic tissue, growing into the lumina of the glands. He said: "It is not possible to make an absolute diagnosis of polypoid sarcoma in such a case, but it is urgent enough in its appearance to justify a radical operation.'" From this report it was deemed best to operate, and the uterus was excised that morning. The operation was rather difficult, on account of the immobility of the uterus. The speaker said that some time ago, at the meeting of the State Medical Society, he read a paper urging an early diagnosis and operative interference in malignant diseases of the uterus; upon this rests the future of hysterectomy. If we wait until the cases are further advanced before we operate, then we are sure to get a recurrence. In his experience it was quite plain that there are too many partial operations done, and the time for a radical operation was thereby lost. A piece of the suspected tissue should be excised, examined by the microscope, and, if there was evidence of malignancy, the uterus should at once be removed *in toto*. The operation is comparatively easy, in those early stages not more difficult than the high amputation of the cervix.

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[1] This case lived a week after being reported. The sloughing occurred around the second center of gangrene, involved all the tissues on that side up to the line of the hair; both eyelids sloughed and the eye-ball was exposed. The two areas united and the entire cheeks became gangrenous. At the time of death the dusky blue color indicative of subsequent sloughing had crossed the median line of the nose and upper lip.

Dr. D. W. Montgomery: For convenience we may divide the cases of cancer of the cervix into three varieties: (1) The flat form. This looks like an erosion, and is often treated as such. (2) The nodular form. Nodules deep in the cervix. (3) The warty form. Warty outgrowths in the cervix. And besides this, we have a papillary form with cuboidal epithelium. Dr. Kreutzmann's case, shown to-night, is of the nodular variety, in which clinically the little circumscribed tumors can be felt below the surface. The other case shown by Dr. Kreutzmann is not so easy of determination; in fact, an unqualified diagnosis of sarcoma cannot be given; but the neoplasm is evidently so full of evil possibilities that the extirpation of the uterus was fully justifiable. The new growth consists of finger-like and club-shaped warty growths projecting into the lumen of the glands of the cervix. These warty growths consists of embryonic tissue covered with epithelium. Macroscopically they formed jelly-like softenings in the cervix, which, on being scraped, gave "cancer juice." There are several interesting forms of these papillary sarcomata in the uterus. One, operated on by Dr. von Hoffmann a couple of years ago, gave no indication previous to the operation of the real extent of the sarcomatous infiltration. The same could be said of a case operated on by Dr. Cushing, a short time ago. In both these cases the growths, microscopically, closely simulated epithelioma.

Dr. Dudley Tait: I would most heartily indorse the remarks made by Dr. Kreutzmann and Dr. Montgomery, if we could accept as final the microscopical results. It is very hard to be positive with the microscope; the best of men have examined healthy glands, and reported them diseased. I would say, as Dr. Shiels said, "Let us call a halt in these things," we have too many now; in surgery also it is the same. Students now discard the stethoscope and jump to the sputum.

The President: I remember one case where the diagnosis by the microscope was correct. The case was one that appeared very much like cervical erosions. A piece of the cervix was sent to Dr. Montgomery who pronounced it epithelioma. The uterus was extirpated and the woman remained well for four years, when it returned, and the patient finally died from it. During these four years it had often been doubted that the diagnosis was correct. Two similar cases are now under observation; in one the uterus was removed two years ago, and in the other three years ago; and so far there has been no return of the disease. We should not accept the microscope as an absolute judge, but in connection with the clinical symptoms it is a valuable aid.

Dr. Montgomery: That case of the President's was a very interesting one. I will admit we may be very liable to error; we may run across a catarrhal gland that is cut off, that may give every appearance of malignancy. We must try to admit everything, simply taking it as we find it. The microscope is simply an enlargement of the field of vision, and gives us additional facts from which to draw conclusions. The wife of a well known gentleman here became ill. A piece of suspected tissue was examined, and, on finding flat epithelial cells about a blood vessel, a diagnosis of epithelioma was made, simply on the presence of the cells about a blood vessel, which we know should not have been there. The uterus was removed, or rather it was a partial operation, and for some time afterward it was doubted by some of the medical men consulted if the diagnosis was correct; but in two years there appeared an immense tumor, and the lady is now dying. The case of breast extirpation that Dr. Tait spoke of was a peculiar case, too. There might have been a mistake made as to the nature of the tumor. We all know how hard it is to diagnose between a simple degeneration of the gland, where it is not scirrhus, and true scirrhus. It would not be a strange thing to have some other man examine it and find only scar tissue. I still have the specimen and shall examine it again. Scirrhus cancer of the breast is most curious in its evolution; that is, the advancing edge is cancerous and in the center there is no cancer. The epithelium degenerates and is absorbed, leaving nothing but cicatricial tissue. I have often thought that cancer of the breast was the most striking example among carcinomata, of the way in which the epithelium will follow the laws of growth, which it was intended it should follow.

DR. KREUTZMANN: In taking out a piece of the suspected tissue for examination, it is best to remove a good-sized, wedge-shaped piece. If the piece is too small, it is almost impossible to examine it. There certainly must be some clinical symptoms or appearance of malignancy, but I would not advise a patient to wait until well-developed clinical symptoms make their appearance before operating; if so, we lose very valuable time. In the first case reported, in cutting into the cervix, I felt suspicious tissue; the idea occurred. "perhaps this is malignant." A piece examined proved it to be so, and the uterus was extirpated. We cannot say in this case that there were any clinical symptoms. I think the microscope is a most important factor in the diagnosis, and any errors seem only to point to the negative. I say again, if there is the least suspicion of malignant trouble, operate. Dr. Howard Kelley, at the Pan-American Medical Congress, urged that women should have their uteri examined, from time to time, as dentists examine the teeth.

DR. TAIT: My reasons for doubting the diagnosis in the breast case spoken of were these: 24 years ago there appeared suddenly, and without apparent cause, a painful swelling of the breasts; there was nothing there the week before. There had been several diagnoses made; at any rate, the breast was excised, and we found it to be a well-marked case of intra-mammary abscess.

DR. MONTGOMERY: I cannot be sure of this breast case; as I said before, I might have been mistaken, but shall go over it again and examine it carefully. I have found that if we examine tissue for cancer, by the microscope, and find it, and the surgeons operate and there is no return, they say the trouble was not malignant. A case from St. Helena was believed to be such an error, but the disease returned in time, and the woman died. We know what terrible trouble an adenoma destruens gives. A case came under my observation some seven years ago: a piece of tissue was brought to me and on examining it microscopically, I diagnosed adenoma destruens. The patient went to Boston, where Gay operated. On the second day, a frightful hemorrhage set in, but the patient recovered, and six years afterward was in good health. There was an absolute diagnosis by the microscope, the picture being faultless.

SAN FRANCISCO MEDICO-CHIRURGICAL SOCIETY.

Regular Meeting, August 6, 1894.

The President, F. Z. BAZAN, M.D., in the Chair.

DR. STANLEY STILLMAN read a paper entitled "A Report of Three Cases of Laminectomy." [Published at p. 581.]

DR. L. C. LANE: There has been so little done in this field of which we have record that these cases are of special interest. Six or seven years ago a man fell at Sausalito, and was thereafter partially paralyzed. He could walk if assisted. His head was in a position indicative of subluxation of the axis or atlas. It was displaced forward and rotated, and was rigidly fixed. Sensation in the lower limbs was greatly impaired, and there was some pain. He had been in this condition nearly a year when he came to me for relief. An incision was made in the median line below the occiput, and a portion of the arch of the atlas was removed—probably as much as one-fourth of the bone—besides a portion of the axis. It was not found very difficult to do. The cord was found to be pressed upon and rose up into the wound. The operation was followed by immediate relief of the disturbance in sensation and partial improvement in motion. The pain was removed. In a few days symptoms of acute encephalitis came on, and the man died in ten days or so. No autopsy was made.

Dr. C. W. Ellinwood said that he had not much to add to the report. The results were sufficiently favorable to encourage operation in compression of the cord from any cause. In each of these cases there was a marked improvement in the nutrition of the patient. The operation is classed as an innocent one. He had been gratified in getting complete primary union of the operative wounds, in spite of the fact that all three cases had bad bed-sores at the time of operation. In the case of the woman life was greatly prolonged. In the man, who died of acute tuberculosis, rapid improvement in the motor and sensory paralyses followed the operation.

Dr. R. H. Plummer said that he had had no personal experience in the operation, but from various considerations he would advise immediate operation in cases in which the cord was compressed by fracture, for delay would result in softening of the cord and render restoration impossible. The operation would add little to the danger, and would give the patient the best chance for recovery, if done early.

Dr. Basil Norris said the selection of cases has been, perhaps, the best that could have been made. There is in the paper evidence of much consideration and excellent work. And from this we have learned how much these operations do to inform the doctor, and how little they do to help the patient. Livingstone described the sensations he experienced when in the clutches of an enraged lion. He said that when he was completely exhausted and unable to make further effort, all hope had gone and fear departed with it. His only thought was of "what next?" So it is with such a patient. The hospital is, I admit, legitimate field of experiment for the surgeon, and when such a patient has just been through the trials of a serious operation, knowing that the surgeons have spared no pains, and all signs of the operation have been cleared away, hope springs; but, later, as the weeks roll on and the wished-for relief fails to come, hope departs, and fear goes with it.

Dr. A. W. Perry said that five years ago a tall boy fell on his neck, bending his head forward. There was complete paralysis and great depression. After a week there appeared an acute bed-sore, which spread rapidly. At the request of the physician, Dr. Perry removed the arches of the fifth and sixth cervical vertebræ. No improvement followed the operation. In those cases in which acute bed-sores form and show such great disorganization the tissues of the cord are so much injured that in all probability the operation is useless.

Dr. C. E. Farnum: A man fell on the curbstone, striking on the back of his head. Twenty-four hours afterward there was complete motor and sensory paralysis below the clavicle. Dr. Simpson, who had seen the case, had recognized fracture of the cervical column. Extension was applied, and the head could be kept by this means in good position. Pressure on the sixth spinous process gave crepitus. Under anesthesia, an incision was made in the median line; the laminæ on either side were moved. The arch of the sixth was completely separated from the fifth, from which a spicula of bone pressed on the cord. By making traction on the head the bodies of the sixth and seventh vertebræ could be somewhat separated. The cord was nearly divided in two. The patient died five or six hours after the operation. Personally, the speaker believed the operation was justifiable. With modern aseptic treatment the operative course is the only one to pursue in many fractures of the spine.

Dr. G. B. Somers had seen seven or eight cases of spinal injury. No attempt was made to do anything because of the lessons learned at an autopsy on a fatal case in which the cord was completely divided. Of interest in this connection is the case of a carpenter who was sent to the Railroad Hospital at Sacramento from Los Angeles, where he had been attended by a railroad surgeon. No operation was undertaken. He lay in the hospital three weeks, and was completely paraplegic. At that time Charcot's method of treatment of tabes by suspension was announced, and it was thought that similar treatment might be of benefit in this case. After the first seance there was noticed slight movements in the digits of the feet. At the end of a month the man was able to walk, and after two months he left the hospital cured. The condition was probably one of subluxation with compression of the cord.

Dr. Stillman said that as to the time of performing the operation, the best authority does not advise immediate interference. Against early operation might be urged the fact that the fragments are then freely movable, making the operation more difficult and dangerous. He would not advise operation in all cases of compression of the cord (such as the one described) in the presence of caries, but only in selected cases, where the pressure symptoms are rapidly increasing.

Dr. O. H. Hund reported "A Case of Extensive Laceration of the Pelvic Floor of Fifteen Years' Standing, Severing the Sphincter; Three Unsuccessful Attempts at Union; Ultimate Success, with Retentio Alva." [Published at p. 589.]

Dr. C. Cushing congratulated Dr. Hund on his success in one of the most difficult operations gynecologists have to do. The reason so many fail is because the circular muscle is forever trying to get away from where it ought to be. This muscle is not much thicker than cardboard, and requires a great amount of care to keep it in place. Success in the operation depends on many elements: the general health of the patient, whether she has syphilis or tuberculosis, whether she is an unmanageable woman, etc. The most rational method of repairing the perineum when the sphincter is torn through is to reproduce, as nearly as possible, the condition which existed immediately after the receipt of the tear, and then draw the parts together with sutures. With ordinary scissors a deep cut is made laterally on each side, pretty well back, through the ends of the divided muscle. A second cut is made upward along side of the vagina in the region of the remnants of the hymen. This is known as Tait's operation, or the flap-splitting operation. Of greatest importance is the previous preparation of the woman. The average woman holds in the colon an amount of feces that is something fabulous. If you give a cathartic for three or four days before the operation, the patient is almost sure to have an enormous dejection two or three days after the operation, and the work is all undone. Emmet advises beginning preparations against such a contingency at least two weeks before the day set for the operation. A good cathartic to be used contains nux vomica and aloes. In all plastic operations, in order to be fairly successful, the flaps must come together without resistance. When an elastic strain is put on tissues, sutures will cut out in 24 hours. The sphincter muscle should be paralyzed as much as possible by stretching. The bowels had best be moved soon after the operation, say on the second or third day. Let the dejection be thin, such as is produced by a seidlitz powder, every two hours on the second day. If the bowels are kept confined for 8 or 10 days, and then emptied with a purge, hard feces will be forced through the anus, tearing again the voluntary sphincter. If the one suture next the anus gives way, the woman has lost control of fluid feces, and is almost as uncomfortable as before the operation. Do not use injections into the vagina or rectum until one week after the operation. The parts should not be disturbed. It is a matter of vital importance. An excellent dressing consists of ordinary zinc ointment, to which morphin and cocain are added, in the proportion of one grain of each to the ounce. Of this, two teaspoonfuls are put in the vagina and rectum and smeared about. It lessens the pain and protects the wound edges from irritation of urine, etc.

Dr. R. W. Murphy referred to a case he had had last month in which, immediately after delivery, he put in stitches and drew the parts together. He ordered flax-seed tea for the patient in considerable quantity. The bowels moved sometimes twice a day, and the dejections were soft. He used cocain on the wounded surfaces when the stitches were being applied, and dressed with carbolized oil. The function of the sphincter was completely restored.

Dr. L. C. Lane said: While we are on this subject, in the literature on this operation you are mostly familiar with the name of Nathan Bozeman. There is a great dispute as to who was leader in the matter—Sims or Bozeman. I had the good fortune to know Bozeman. He spent a great deal of attention in the preparation of the patient. "The secret of my success," said he, "is in getting rid of the atresias." An odd way to put it, but expressive. This he did by continual stretching.

Dr. C. E. Farnum suggested, in the light of the remarks concerning the difficulty in finding the ends of the divided sphincter, that those interested in the subject dissect a badly torn perineum. One is greatly astonished to see to what great depth one must cut in order to find the severed ends of the muscle.

Dr. J. O. Hirschfelder exhibited a specimen of hemorrhagic infarction of the lung, showing the offending clot at the apex of the cone of engorgement. The case was originally one of aortic insufficiency. The left heart was hyper-

trophied, as was also the right, but as compensation failed, fatty degeneration took place. In the appendix of the right auricle, where the circulation must have been very slow, old coagula were found, and are to be still seen in the specimen. There was cirrhosis of the liver. The case is interesting from the number of infarcts present and from the demonstration of the cycle of changes leading up to the infarction.

SPECIAL CORRESPONDENCE.

BERLIN.

Conferring Degrees at the Berlin University.—Traditions in the Profession.—Medical Teaching in Berlin.—The Institute for Infectious Diseases.—Tuberculin as a Diagnostic and Therapeutic Agent.—Serum Therapy.—Results Obtained by Treatment.

A few days ago I attended a doctorate ceremony at the Berlin University. The candidate for his degree had already successfully passed his examination, but he had still to undergo an ordeal something like our commencement exercises. The "Dekan" of the University, von Bergmann, occupied the rostrum in his official garb, a heavy red surtout. Two conditions were quite evident: first, that comfort and ornamentation are not interchangeable (it being an exceedingly hot day); and secondly, that the surtout fitted the office and not the man, for it was evident that the coat passed from office to office without any change in its material conditions. The candidate, after presenting a series of theses in defense of his dissertation, was opposed by a physician, usually a friend of the candidate. The disputants, however, came out all right in the end, simply because the opponent had been carefully instructed what to say by his friend the candidate. Prof. von Bergmann seemed bored by this automatic ceremony, and after delivering something in Latin which was as intelligible to the auditor as the oath delivered by a police-court clerk, he handed the candidate his diploma. Thus ended a formality, which even my friend, the candidate, specified as farcical.

It is indeed strange how obsequious the medical profession is to tradition. Take as instances the presentation of theses by our graduates in medicine and the administration of the Hippocratic oath at commencement exercises. The thesis presented by the German candidate of medicine usually embodies something original, or at any rate, it serves as a medium for the report of interesting cases. Not so, the theses presented in our country. In the main they are adequate exponents of misguided plagiarism. If limited time is urged in extenuation of this countenanced literary piracy, then it is preferable to discontinue this mere formality, rather than to establish such a precedent for medical writing on the very threshold of the physician's career. One original fact, even though it be the enumeration of wrinkles on the face, is worth more than all the cumbersome articles in our medical journals, which are designed for no other purpose than the concealment of thought. The Hippocratic oath is another barbarism which should be relegated to oblivion. A few years ago, I had heard that a friend of mine, a physician, had discontinued the practice of medicine to assume charge of a quarry. I spoke to him of his apostacy, of his violation, in fact, of the Hippocratic oath, and when he demanded to know the nature of the violation, I informed him that he had sworn never to cut for stone.

Berlin, as well as Vienna, is a center of attraction for the American physician. If the prestige of a foreign medical education be the object of transatlantic migration, then let him come by all means, but if he hopes to consummate the more laudable ambition, the acquisition of medical knowledge, it will be cheaper and better for him to remain at home. It is an error to suppose that the eminent German physician consumes his time in teaching. It is an almost indisputable fact, that the German professor is a notoriously bad teacher. The fact is, that he often considers teaching a menial task which he relegates to assistants. Here in Germany, original research is the paramount ambition of every one connected with a university. Advancement is attained because the physician has achieved something in science, his didactic ability playing no rôle. Thus the German physician, by concentration in the direction of limited areas of research, is constantly adding to the data of scientific medicine. So relentless has this scientific inquiry become, that fields formerly regarded as limited, are so extended that the creation of new specialties can be confidently prognosticated. The hematologist will concern himself only with the pathology of the blood, the bacterio-therapeutist will only use remedies of bacteritic origin, etc.

Koch may be cited as an instance where eminence prefers the laboratory to the didactic arena. He is an honorary professor and director of the "Institute for Infectious Diseases." While all the other departments of the Berlin University serve as depots for scientific research and instruction, this institute is devoted exclusively to the furtherance of science. Here, surrounded by such eminent and earnest workers as Wasserman, Ehrlich, Pfeiffer, Cornet, and others, he is evolving a superstructure that will revolutionize modern medicine. He will create a new era in medicine that will be known as "the age of bacteria." His results are atomically accretive, and are destined to survive a mere ephemeral existence. Bacteriology is even now so closely interwoven with medicine, that success as a medical practitioner postulates a thorough knowledge of bacteriology. The Institute for Infectious Diseases is divided into a scientific and hospital department. The former consists of a bacteriological and chemical laboratory, while the hospital department has accommodations for 130 patients.

Tuberculin is extensively used at the Institute for diagnostic and for therapeutic purposes. Tuberculin is prepared by Koch from old bouillon cultures of tubercle bacilli, which have been evaporated on a water bath to $\frac{1}{10}$ their volume, and then separated from the dead bacilli by filtration. As a diagnostic agent, tuberculin serves as a delicate reaction for all tuberculous processes. Injected under the skin in 5 milligramme doses, no reaction is observed in the healthy subject. Should the individual be tuberculous, a pyrexia of many hours' duration supervenes, attended with headache, nausea, and vomiting, If the tuberculous patch is observable, redness and swelling of the same will occur. I was assured that in some cases 10 and even 15 milligrammes of tuberculin were necessary before any reaction manifested itself. They now assume that fever occurring in the course of pulmonary tuberculosis is purely accidental and due to mixed infection, namely, the presence of streptococci. In an article written nearly five years ago I maintained that the intermittent temperature and sweating in phthisis were septic processes independent of the action of the tubercle bacilli; and furthermore, that this infection emanated from the stagnant secretions in the lung caverns; that when the secretions were removed, and the cavities lavaged by arial currents as achieved by the use of the pneumatic cabinet, fever and sweats could be eliminated from the syndrome of the disease. The use of tuberculin for diagnostic purposes is not regarded with the same indifference by the medical profession in Germany. Everybody has a "little tuberculosis." That is, there may be some latent patch which is benign if left alone, but irritate it, as you no doubt will by tuberculin injections, and the previously encapsuled and inert bacilli may become disseminated, and conduce to general infection. Therapeutically, tuberculin is of signal advantage in lupus, tuberculous ulceration of the larynx, intestinal and peritoneal tuberculosis. The danger of relapse, however, is always great. Tuberculous affections of the bones and joints are apparently uninfluenced, while the results in incipient phthisis have not been definitely determined.

Serum therapy, or therapeutic immunization, as it is sometimes called, will soon figure prominently in the treatment of many infectious diseases, notably diphtheria. In order that this mode of treatment may be clearly understood by your readers, even though I commit the offense of being tautological, a certain amount of accepted knowledge must be rehearsed, which eventually culminated in the adoption of serum therapy. During epidemics, people who are not attacked enjoy what is denominated *natural immunity*. *Acquired immunity* is often secured after certain infectious diseases, like scarlatina, variola, etc., the subject usually resisting further invasions of the same disease. *Artificial immunity* had its genesis in the use of vaccine virus against variola infection. For a long period vaccination against smallpox was the only means of immunization known in human pathology, although in veterinary medicine vaccination had been successfully employed in a variety of infectious diseases. Vaccine virus is identical with the virus of variola, differing from the latter only in potency, its strength having been mitigated by its passage through the body of the cow. When Pasteur employed vaccination against anthrax and chicken cholera, he used heat as a means of diminishing the virulence of his poison, by exposing cultures of specific germs to various degrees of heat, the higher the temperature the greater the mitigation of the virus. Still other means have been adopted for graduating the virulence of the inoculating medium, such as passing electrical currents through culture media, or by the addition to the latter of chemical substances, such as carbolic acid, bichromate of potash, etc. Another decided step forward in the preparation of the inoculating medium was to filter the culture fluid, thus obtaining a filtrate which was absolutely free from bacteria. This filtrate can, by attenuation, be graduated to all degrees of virulence, and is a successful immunizing agent. The successful employment of filtered cultures demonstrated that the bacteria were not alone responsible for the effects of immunization, but that this was secured by products derived from the growing bacteria. These products could also be found in the blood of individuals who had just recovered from some infectious disease. Thus originated the latest method of securing immunization, namely, the abstraction of blood from an animal that had been inoculated artificially. At the present time, the explanation of immunity by the theories of phagocytosis and the bactericidal action of the tissue fluids have been supplanted by the theory which supposes the antidotal action to be dependent on antitoxines, products derived from the growth of bacteria. Behring and Kitasato found that if the blood taken from animals immunized against tetanus is mixed with tetanus virus outside of the body, the virus was destroyed. If, on the other hand, they injected the serum of the blood from animals immune to tetanus into animals suffering from tetanus, a disappearance of the latter affection occurred, provided the injections were used early enough. Thus far serum therapy has been used in many infectious diseases, notably in diphtheria. At the Institute the results in diphtheria with the serum treatment have been marvelous. The diphtheritic blood antitoxine is obtained from goats, these animals not only being susceptible to the diphtheritic virus, but they also show a decided resistance to the disease. The manner of obtaining the serum is a prolix process, only available in well-equipped laboratories, and as the serum will soon be placed on the market, I will not describe its mode of preparation. The results obtained with the diphtheritic and toxine solution in 220 cases of diphtheria in children, treated at various hospitals in Berlin, are as follows:

Number Treated.	Cured.	Died.	Percentage of Cures.	Of these 67 were tracheotomized with the following results:	Cured.	Died.	Percentage of Cures.
220	168	52	76.4		37	30	55.1

The foregoing statistics show very good results, but they are largely influenced by the time when treatment was commenced. With the conventional methods of treatment, the results are not measurably influenced by the time when treatment is begun. Not so with the serum therapy; if treatment is begun on the first day, cure results in 100 per cent. of the cases; if on the second day, 97 per cent.; third day, 86 per cent.; fourth day, 77 per cent.; fifth day, 56.5 per cent.

ALBERT ABRAMS.

Berlin, August 5, 1894.

LONDON.

Prof. Fraenkel's Clinic at Berlin.—The Ear Clinic of Prof. Lueae.—Schweigger and Hirschberg.—Göttingen and Marburg.—The International Medical Congress.—Overcrowding and Deficient Accommodations and Facilities.—The Vienna Clinics.—Heidelberg.—Snellen's Clinic at Utrecht.—Moorfields.

One who has spent some time under the careful instruction of a professor in a smaller German university, finds rich material in the larger clinics, and his previous training enables him to use it to the best advantage. In the Nose and Throat Clinic of Prof. B. Fraenkel, at Berlin, each student becomes, for the time, a private practitioner. Each patient, upon entering the clinic, is examined by the professor or one of his assistants, the history and proposed treatment of the case written out in full, and the handling of the case is then intrusted to some of the twenty participants in the course. This individual, alone, is responsible for the conduct of the case. Should he require consultation, he may call the professor or an assistant. Each course lasts six months, and, during this time, one becomes acquainted with the ordinary forms of nose and throat diseases, as well as seeing many of the rarer varieties.

The Ear Clinic of Prof. Lucae, and, more particularly, the vacation course given by his assistant, Dr. Jansen, are unsurpassed by any others for this branch of surgery. The operative material is enormous, and one who wishes to gain a complete knowledge of the treatment of diseases of the mastoid, frontal sinus, antrum of Highmore, and the intracranial sinuses, finds ample opportunity here. During the vacation, operative courses upon the nose and ear are given by Dr. Jansen, and, during this time, each one is permitted to do all of the minor operations many times, and occasionally one of the more important ones falls to his lot. The greatest triumph of Dr. Jansen lies in his successful treatment of the various complications of middle ear troubles, viz: sinus thrombosis, extradural abscess, choleasteatoma, etc.

In the same building with the Ear Clinic is the Eye Clinic of Prof. Schweigger, in which 10,000 cases are treated yearly. As is unfortunately the case in most of the eye clinics, the opportunities for ophthalmoscopic examination are limited; however, the visitor may become thoroughly acquainted with all the external diseases of the eye. The work in the clinic of Prof. Hirschberg, which is also in the neighborhood, is very good, and the professor, having special talent as a teacher, the visitor may spend a long time with profit. More attention is given to asepsis and antisepsis than is generally the case in eye clinics.

At the end of my term, a day was passed at the model clinic of Prof. Schmidt-Rimpler, in Göttingen. This city lies somewhat out of the beaten track of foreign medical men, but any one would be well repaid for turning aside for a short visit. Prof. Schmidt-Rimpler very kindly domonstrated his beautiful method of estimating the refraction. One of the most delightful old towns in Germany, and one comparatively little known to the globe-trotter, is Marburg, on the Lahn. In this charming little nest is a very old university, possessing a small but well-appointed eye clinic, under the direction of a most genial and agreeable gentleman, Prof. Uhthoff, one of the most distinguished of the younger ophthalmologists. He has already won for himself an enviable reputation by his works upon "Syphilis of the Brain," "Tobacco Amblyopia," and other subjects appertaining to the influence of brain and nerve lesions upon the eye. Prof. Uhthoff is a most enthusiastic teacher, and the material of his clinic, as well as of his laboratory, is at the service of all advanced students. All cases are studied here in the most scientific manner, and very valuable work is done in the clinical laboratory.

After some weeks of work in this clinic, I accepted the invitation of Prof. Uhthoff to accompany him to the International Medical Congress, at Rome. Upon this subject enough has been written, and little of interest could be added to the letters of the many American correspondents. Suffice it to say that the imperial city seems to have had a plethora of medical men or else the successors of the Cæsars are lacking in executive ability. We received the last available room in the city, and were compelled to endure many discomforts during our stay. It is questionable whether or not such general assemblages add much to the general well being or to the stock of knowledge. Italian being known to so few of the foreign visitors, the papers of the Italian members were appreciated by few save their own countrymen. Those who, like myself, understood only English and German, found it very trying to listen to so many French and Italian papers; however, after Prof. Uhthoff had read his paper, we devoted the remainder of the time to sight-seeing. The enormous crowd of visitors and the insufficient accommodations rendered the social events somewhat of a failure. The reception at the Capitol degenerated almost into a riot, and the grand banquet became a scramble. Those who attended the theatrical performance given "in honor of the congressionists," and who paid a large price for seats, seem not to have appreciated the virtues of a free admission with charges for seats. The illumination of the Colosseum and other ruins of ancient Rome was grand and impressive, and inclined one to envy Nero, who arranged his spectacles upon a grander scale. Our sight-seeing was extended to Naples and the Island of Capri, on the south, and Florence, Milan, and Genoa, on the north. At Milan, our pleasant companionship ended, Prof. Uhthoff returning to Germany and I proceeding to Vienna *via* Venice.

Vienna has long been the center of study for the specialists, and, although Berlin is now bidding for this class of patronage, Vienna will continue for many years to be the best field for this work. In the eye clinics of Prof. Fuchs, where 15,000 patients are treated yearly, the clinic rooms are so small that little opportunity is afforded for the visitor to examine patients. The main features of interest are the operations, of which there are a large number, and the delightful clinical lectures. Every one who has read Prof. Fuchs' book on the eye has been charmed by its style; but more interesting and more complete are his lectures. He is undoubtedly the most popular lecturer in this branch in Europe. A number of chairs are reserved for visitors, and all are welcomed. In the laboratory, adjoining the clinic, Dr. Dimmer holds courses upon "The Pathology of the Eye" and "Refraction." These courses are very popular, and, because of Dr. Dimmer's thorough acquaintance with English, especially valuable to Americans. Courses are also given by Prof. Fuchs' first assistant, and occasionally by that veteran teacher, Prof. Bergmeister. The latter's operative course is one of the best, but is seldom given now. Ear work may be done with Prof. Politzer, Prof. Gruber, or Dr. Urbantschitsch. The last named is an exceedingly popular teacher, and gives a fine course. He has also devoted much attention to the education of the deaf, and has demonstrated that one who is apparently totally deaf may be taught to hear loud sounds and even ordinary conversation. The courses of operations on the ear are not equal to those in Berlin and Halle.

Returning to Heidelberg, that most beautiful of all German cities, some time was spent in the eye clinics of Prof. Leber and the throat clinic of Prof. Jurasz. The excellence of these clinics and their advantages have been described in a former letter. The laboratory of the eye clinic is one of the most complete in its appointments, and especially adapted for those wishing to do independent scientific work. Through the kind offices of Prof. Leber and an American friend, Dr. Shoemaker, of Philadelphia, I was fortunate enough to receive an assistantship at the London Ophthalmic Hospital.

En route to London, a short visit was made to the clinic of Prof. Snellen, in Utrecht, Holland. The new eye hospital just completed at that place is perfect in every detail, Prof. Snellen and his assistants speak English and German fluently, but the Dutch language is used in the clinic. It is unfortunate that the field of usefulness of so great a teacher is limited by the use of a language so little known to foreigners. One may spend a few days very profitably in witnessing the operations and learning the methods of this clinic.

Moorfield's, as it is popularly known, or the London Ophthalmic Hospital, is the second in size in the world, a larger one being in St. Petersburg. The clinic is divided into three departments, each presided over by a surgeon, who serves two days a week. The surgeons have a number of assistants, who examine all the refraction and ophthalmoscopic cases. The material is very large, amounting to 30,000 cases a year. Being assistant for three surgeons, my time is occupied each day from 9:30 until 2:30, when I examine many cases. Retinoscopy seems to have reached its highest development in this clinic, and the accuracy with which astigmatism is measured is a revelation to one accustomed to other methods. Some of the more experienced assistants are able, by this method, to select the exact glass in the most complicated case. The assistants work quite independently of the chief surgeon, calling upon him only when they are in doubt, hence the position is adapted only for those who have had some previous experience.

A. B. McKee, M.D.

London, September 1, 1894.

REVIEWS AND NOTICES.

The F. A. Davis Co., of Philadelphia, will shortly issue a new work on "Obstetric Surgery," by Drs. Egbert H. Grandin and Geo. W. Jarman, of the New York Maternity Hospital. The surgical side of obstetrics in relation to the newer lines of practice, made possible through asepsis and antisepsis, will be thoroughly considered. The work has been prepared from a teaching standpoint, and will be elucidated by numerous engravings and photographic plates. A companion volume, dealing with pregnancy and the physiological and pathological puerperium, is also in preparation by the same authors.

Essentials of Refraction and the Diseases of the Eye. By Edward Jackson, A.M., M.D., Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine; Attending Surgeon to the Wills Eye Hospital, etc. Part II. Essentials of the Nose and Throat. By E. B. Gleason, S.B., M.D., Surgeon in charge of the Nose, Throat, and Ear Department of the Northern Dispensary of Philadelphia; formerly Assistant in the Nose and Throat Dispensary of the Hospital of the University of Pennsylvania; and Assistant in the Nose and Throat Department of the Union Dispensary. Saunders' Question Compends, No. 14. Second edition revised; 124 illustrations. Philadelphia: W. B. Saunders; pp. xiv–290. Price, $1.00.

That a second edition of this work has been called for so soon shows that it has found a field not well filled. The second edition has been increased by a few pages, and the subject-matter brought up to date. A surprising amount of information is contained in the 290 pages of short questions, and the concise answers to them. It is particularly adapted to the use of practitioners who occasionally are obliged to treat cases of eye, nose, or throat diseases, but who have not the time to study the more complete works upon the subjects. Students will also find the concise manner of dealing with the various subjects very helpful. There is no occasion to mention any special part of the book, as every subject is treated with care, and as far as the condensed nature of the work make it possible with clearness and precision.

Essentials of Nervous Diseases and Insanity; their Symptoms and Treatment. A Manual for Students and Practitioners. By John C. Shaw, M.D., Clinical Professor of Diseases of the Mind and Nervous System, Long Island College Hospital Medical School; Consulting Neurologist to St. Catharine's Hospital and Long Island College Hospital. Second edition, revised; 48 original illustrations; Saunders' Question Compends No. 21. Philadelphia: W. B. Saunders; pp. 194; price, $1.00.

This manual is a small 12-mo. of 190 pages, and is a second revised edition of one of Saunders' question compends. The author speaks of his book in the introduction as a primer for advanced students. Considering the scope of the work and the ground covered, it could hardly be more than that; still, the writer would seem to have made good use of the space at his command, and in the short and necessarily superficial description of the etiology, symptoms and pathology of the diseases, manages to include a good deal of information, although this is not always equally distributed among the different subjects of which he treats. The last 37 pages of the book are devoted to insanity, which is naturally treated very briefly. As a compend the book will, no doubt, suit the prevalent taste of most students, for brief and concise treatises. It contains 48 illustrations, which are fairly well executed, most of which originally and satisfactorily display the points of especial interest.

MEDICAL NEWS.

LICENTIATES OF THE BOARD OF EXAMINERS.

At a meeting of the Board of Examiners, held September 5, 1894, the following physicians, having complied with the law and the regulations of this Board, were unanimously granted certificates to practise medicine and surgery in this State:

William P. Armstrong, San Diego; Med. Dept. Univ. Louisville, Ky., Feb. 27,'57.
Robert A. Campbell, Los Angeles; Coll. Med. Univ. Southern California, June 1,'94.
George Lee Eaton, Oakland; Vanderbilt Univ., Tennessee, Mar. 26,'94.
Luther Calvin Havice, San Diego; Jefferson Med. Coll., Pennsylvania, May 2,'93.
John Turner Higgins, Santa Clara; Med. Dept. Univ. Minnesota, June 7,'94.
C. N. Hopkins, Los Angeles; Coll. Phys. and Surgs. Illinois, Mar. 29,'92.
Donald Clayton Lazier, Geyserville; Cooper Med. Coll., California, Dec. 7,'93.
M. K. McKenzie, Kern; Detroit Med. Coll., Michigan, Mar. 10,'81.
Luther Michael ,Fortuna; Med. Coll. of Ohio, Mar. 7,'84.

Thos. B. Moore, Los Angeles; Univ. Edinburgh, Scotland (M. B. and C. M.), Aug. 1,'93.
Judson Waldo Paul, Santa Clara; Bellevue Hosp. Med. Coll., New York, Mar. 30,'91.
John A. Rosenberger, Fowler; Jefferson Med. Coll., Pennsylvania, May 9,'94.
Frederic Schiller, Los Angeles; Laval Univ., Quebec, Canada, Sept. 20,'93.
William H. Smith, Los Angeles; Omaha Med. Coll., Nebraska, Mar. 25,'86.

The following application was refused: Mme. Juilly, Los Angeles.

CHAS. C. WADSWORTH, Secretary.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the U. S. Army, from August 21 to September 20, 1894.

In accordance with the provisions of par. 1662, A. R., as amended by G. O. No. 38, series of 1890, headquarters of the Army, Lieutenant-Colonel William D. Wolverton, Deputy Surgeon-General, Medical Director, will proceed to and inspect the Medical Department at Forts Canby and Townsend, Wash. Par. 2, S. O. 148, Dept. of the Columbia, Sept. 13, 1894.

The leave of absence for seven days granted Captain C. N. B. Macauley, Asst. Surg., in Orders, C S., Fort Wingate, N. M., is extended twenty-three days. Par. 2, S. O. 55, Dept. of Colo., Sept. 4, 1894.

Captain Walter D. McCaw, Asst. Surg., is relieved from duty at Camp near Wawona, California, and will repair without delay to the Presidio of San Francisco, California, for temporary duty and report, on his arrival, to these headquarters for further orders assigning him to duty with light batteries of the fifth Artillery on their practice march. Par. 1, S. O. 115, Dept. of Colo., Sept. 15, 1894.

Under instructions from the War Department, Captain E. C. Carter, Asst. Surg., U. S. A., is relieved from duty at Vancouver Barracks and in this department, and will report in person as soon as possible to the Commanding Officer, Fort Buford, N. D., and by letter to the Commanding General of the Department of Dakota. Par. 1, S. O. 152, Dept. of the Columbia, Sept. 19, 1894.

Leave of absence for four months, on surgeon's certificate of disability, is granted Major Washington Mathews, Surgeon.

Major John D. Hall, Surgeon, upon the arrival of Major J. C. Merrill, Surgeon, at Fort Sherman, Idaho, will be relieved. and report for duty at Madison Barracks, N. Y., relieving Major Daniel G. Caldwell, Surgeon.

The leave of absence for seven days, granted Capt. Louis Brechemin, Asst, Surg., is extended twenty-three days.

ITEMS.

Dr. W. L. Moore has moved from 997 Market street, San Francisco, Cal., to Hawthorne, Nevada.

Dr. J. D. Morris has removed from Snohomish, Wash., to Seattle, Wash., and has opened an office at 614 Oak street.

Dr. D. D. Crowley, who has been in Europe for several months, will resume practice on Tuesday, October 9th, at his office, 1068 Broadway, corner Twelfth street, Oakland. Hours, 2 to 3:30 P. M.; 7 to 8 P. M.